Park News Fall 2016-Spring 2017

National Park Service
U.S. Department of the Interior

The official newspaper of
Cape Cod National Seashore

Explore Cape Cod National Seashore

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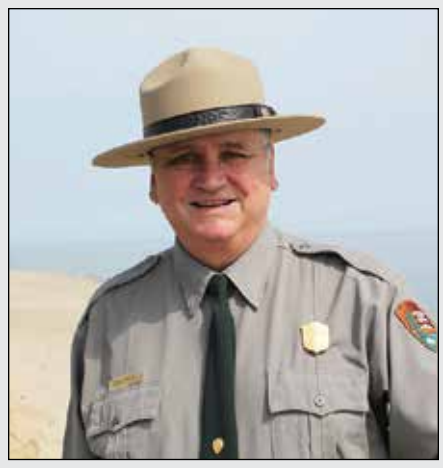
Follow us: www.nps.gov/caco

Welcome

Superintendent's Message



George Price, Superintendent

Welcome to Cape Cod National Seashore! The National Park Service Centennial celebration comes to a close in December 2016. What an exciting year it has been! It was in August of 1916 that the Organic Act establishing the National Park Service (NPS) was passed by Congress and signed by President Wilson.

Prior to the establishment of the NPS in 1916, some national parks had already been designated. Yellowstone was the first, in 1872. Operating under civilian managers, with help from the US Army (including African American Buffalo Soldiers), these early parks were threatened by grazing, timber harvesting, and poaching. Businessman Steven T. Mather wrote to his classmate, Secretary of the Interior Franklin Lane, to complain about the conditions of the parks. Secretary Lane challenged him to come to Washington to help fix the problems.Mather took up the challenge, enlisting the help of a young government lawyer, Stan Albright, and landscape architect, Fredrick Law Olmsted, Jr., who wrote the NPS legislation. Mather and his team created a system of national parks with a government agency, the National Park Service, to run it.

The legislation mandates the NPS "to conserve the scenery and the natural and historic objects and the wild life therein and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations."Borrowing the uniform style from the Army, including the flat campaign hat, and facilities they left behind, Mather and Albright recruited a new breed of national park employees who were dedicated to the mission of protecting our country's most significant natural and cultural resources and for providing for visitor use.

Today there are over 400 units in the National Park System—from the Grand Canyon and the Statue of Liberty to Gettysburg Battlefield and Acadia. Once seen as a system of only vast western landscapes, the National Park System grew to include historic and cultural sites that represent social change, including Martin Luther King, Jr. National Historic Site in Atlanta, GA; Women's Rights National Historical Park in Seneca Falls, NY; and Brown v. Board of Education National Historic Site in Topeka, KS. Presidents' homes and birthplaces, like Abraham Lincoln's in Springfield, IL, John F. Kennedy's in Brookline, MA, and battlefields, like Antietam in MD and Saratoga in NY, further rounded out this system that preserves our nation's most compelling resources and stories.

Cape Cod National Seashore was signed into law by President Kennedy in 1961 and was a new model for its time. For the first time in the NPS, there was mixed management of the 44,000 acres within the national seashore boundary, federal appropriations were set aside to purchase private land; and a first-of-its kind federal Advisory Commission was created to advise on policy and park development. This commission held its 300th meeting in November 2015! Since 1961, the definition of national parks has further expanded with the inclusion of places like Lowell and Boston Harbor Islands here in Massachusetts.

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The goal of the National Park Service Centennial has been to connect with and create the next generation of park visitors, supporters, and advocates. As the Centennial year comes to a close in late fall, we hope the spirit of the celebration will remain with us all as we embrace the second century of protecting and providing for the enjoyment of these treasured lands.

George E. Price, Jr.
Superintendent

FIND YOUR PARK

As the National Park Service 2016 Centennial comes to a close, the Centennial invitation to Find Your Park extends beyond 2016. A park can be a place, a feeling, or a state of mind. With more than 400 national park areas across the US, there are many opportunities to Find Your Park. Visit www.nps.gov to learn more about the entire National Park System.

On the cover: *Sanderlings,* by John Chapman. John was a seasonal interpretive park ranger at Cape Cod National Seashore in 2015.

National Park Service
U.S. Department of the Interior

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Wellfleet, MA 02667

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Park Headquarters
508-771-2144
Fax Number
508-349-9052
Salt Pond Visitor Center
508-255-3421
Province Lands Visitor Center
508-487-1256
Race Point Ranger Station
508-487-2100
Oversand Office at Race Point Ranger Station
Route Information: 508-487-2100, ext. 0926 (April 15 through November 15)
Permit Information:
508-487-2100, ext. 0927
Nauset Ranger Station
508-255-2112
North Atlantic Coastal Lab
508-487-3262

Website: www.nps.gov/caco

Emergencies: 911

CAMPING

The National Park Service does not operate a campground at Cape Cod National Seashore. Camping is available at private and state-operated facilities (see page 19). Overnight camping and parking within Cape Cod National Seashore are prohibited. A limited number of self-contained vehicle permits for overnight stays on Race Point Beach are available through the seashore's oversand permit office at Race Point Ranger Station, Provincetown. Telephone: 508-487-2100 ext. 0927

General Information

Cape Cod National Seashore's 40 miles of pristine ocean beach and 44,000 acres make it a premier destination for exploring natural and cultural features and enjoying recreational activities.

VISITOR CENTERS

View from Salt Pond Visitor Center terrace. *NPS photo*

Cape Cod National Seashore has two visitor centers: Salt Pond in Eastham and Province Lands in Provincetown. Both centers have staff to assist visitors with orientation and trip planning; and stores featuring books, maps, puzzles, games, apparel, and other seashore-related items provided by the park's education partner, Eastern National.

Salt Pond Visitor Center: open daily from 9 AM to 4:30 PM (later during the summer). This visitor center offers magnificent views of Salt Pond, Nauset Marsh, and the Atlantic; an outstanding museum; and regularly scheduled films in the theater. Exhibits showcase the Outer Cape's location in the Gulf of Maine ecosystem and Wampanoag culture and history. Restrooms are available in the parking area. The Nauset Marsh and Buttonbush trails and the Nauset Bicycle Trail are nearby. Location: 50 Nauset Road, Eastham. Telephone: 508-255-3421.

View from Province Lands Visitor Center observation deck. *NPS photo/Keohan*

Province Lands Visitor Center: open daily from 9 AM to 5 PM, mid-April through October 15. Just two miles from the tip of the Cape, this center features an observation deck with 360-degree views; a small exhibit area; showings of park orientation films every half hour (9 AM to 4:30 PM). Whales are often viewable from here. Restrooms are available in the parking area. The Province Lands Bicycle Trail and Race Point Beach are nearby. Location: 171 Race Point Road, Provincetown. Telephone: 508-487-1256.

PARK FILMS

Salt Pond and Province Lands visitor centers routinely show the following films throughout the day:

The Sands of Time (12 minutes) showcases the formation of Cape Cod by ice, wind, and waves, and describes the processes that continue to shape the Cape today.

Wooden Ships and Men of Iron (12 minutes) depicts Cape Cod's fascinating maritime history, including whaling and the lifesaving service. It contains graphic footage of an early 20th-century whaling ship hunting and processing whales.

Voice of Cape Cod (12 minutes) describes Guglielmo Marconi's history-making trans-Atlantic wireless communication that took place on the windswept bluffs of Cape Cod in January 1903, forever changing communication technology.

Thoreau's Cape Cod (12 minutes) is the story of Henry David Thoreau's 19th-century adventures, discoveries, and writings on Cape Cod.

Return of the Tides (10 minutes) discusses the Herring River estuary in Wellfleet and the planned tidal restoration project that will re-establish native salt-marsh habitat in the area.

CAMPFIRES

A limited number of campfire permits per day, per seashore beach, may be reserved up to three days in advance in person or by phone. Locations are: Salt Pond Visitor Center for Coast Guard, Nauset Light, and Marconi beaches; or Province Lands Visitor Center for Head of the Meadow, Race Point, and Herring Cove beaches. Fire permits for the Oversand Route are issued through the Oversand Station at Race Point. Permits are free and must be picked up at the reserving visitor center prior to 3:30 PM the day of the fire. Demand often exceeds the number of permits available. People waiting in line when the visitor centers open are given reservation priority over those who call in by phone.

How to Reserve a Fire Permit:

Reserve on:	**Sun**	**Mon**	**Tues**	**Wed**	**Thurs**	**Fri**	**Sat**
For a fire on:	**Wed**	**Thurs**	**Fri**	**Sat**	**Sun**	**Mon**	**Tues**

In the future, Cape Cod National Seashore may use an online reservation system for fire permits. Check back in 2017 for details as available.

ACCESSIBILITY

Park trails near Doane Rock in Eastham and the Marconi Station Site in Wellfleet have been surfaced to accommodate wheelchairs. Buttonbush Trail is available for people with impaired vision. Some Park publications also have large print versions. Park films have captions and audio descriptions. Coast Guard and Herring Cove beaches provide accessible parking, restrooms, changing facilities, and beach wheelchairs. Herring Cove Beach features showers that accommodate wheelchairs.

BIKING

NPS photo

There are three bicycle trails under the care and maintenance of Cape Cod National Seashore: Nauset Trail in Eastham (1.6 miles), Head of the Meadow Trail in Truro (2 miles), and the Province Lands Trail in Provincetown (loop trail 5.45 miles). Ask for a brochure with trail maps at both visitor centers, or check www.nps.gov/caco/planyourvisit/biking-at-cape-cod-national-seashore.htm

- Bike accidents injure more people each year at the seashore than all other activities combined.
- *Bike safety starts with helmets.* Regardless of age, all riders are urged to wear protective headgear. Massachusetts state law requires children 16 and younger to wear protective helmets when on a bicycle, even if only a passenger. Take time to fit your helmet properly – snug and level on your head.
- Test ride your bike to check brakes, seat, and handlebar settings.
- Trail conditions vary. Stay alert for sharp curves, steep hills, and sand-covered sections.
- Keep an eye out for park volunteers on bike patrols, and show them you care about safety and are a safe rider.
- Biking is prohibited on seashore beaches.

SELF-GUIDING TRAILS

NPS photo/McQueeney

Self-guiding trails at the seashore that are open year round: in Eastham - the Fort Hill, Buttonbush, Nauset Marsh, and Doane trails; in Wellfleet - the Atlantic White Cedar Swamp and Great Island trails; in Truro - Pamet Area Bearberry Hill Overlook, Small's Swamp, Highlands Woods Walk, and Pilgrim Spring trails; and in Provincetown - the Beech Forest Trail. Interpretive folders with information on natural and historic features are available at some trailheads. See page 17 for more detailed information about trails.

Beach Activities and Fees

Cape Cod National Seashore manages six ocean beaches in four towns: Eastham (Coast Guard and Nauset Light beaches), Wellfleet (Marconi Beach), Truro (Head of the Meadow Beach), and Provincetown (Race Point and Herring Cove beaches). All national seashore beaches include the following facilities and services: showers, paved parking, restrooms, changing rooms, drinking water, water-quality testing, and lifeguards (late June through Labor Day). Two beaches, Coast Guard in Eastham and Herring Cove in Provincetown, are accessible to people with disabilities and have wheelchairs capable of traveling over sand.

BEACH ENTRANCE FEES AND NATIONAL PARK PASSES

Beach entrance fees are collected daily from late June through Labor Day at all six seashore beaches. Fees are also collected on weekends and holidays from Memorial Day to late June, and after Labor Day through the end of September, at Herring Cove, Race Point, Nauset Light, and Coast Guard beaches.

Entrance Fees	
Private Vehicle	$20
Motorcycle	$10
Per Person *(Walk-in, Bicycle)*	$ 3
Groups	Inquire
Annual Passes	
Cape Cod National Seashore	$60
Interagency *(Mulitple Federal Fee areas)* *	$80
Lifetime Passes	
Interagency Senior *(Age 62+)* *	$10
Interagency Access Pass *(Permanently Disabled)* *	FREE
Other	
Annual Pass for U.S. Military Available to active U.S. military members and dependents in the Army, Navy, Air Force, Marines, and Coast Guard, and Reserve and National Guard members. (Must be obtained in person by showing a Common Access Card [CAC] or Military ID [Form 1173].) * Photo ID required for pass use.	FREE

BEACH SAFETY

NPS photo

BEACH WARNING FLAGS:

A colored flag is flown at the head lifeguard chair. A sign at each beach describes the meaning of each color.

Green:	Low Hazard. Calm conditions
Yellow:	Medium Hazard. Moderate surf and/or currents
Red:	High Hazard. High surf and/or strong currents
Red:	Water closed to the public (with no-swim symbol)
Purple:	Dangerous marine life

If there is a shark sighting, lifeguards will close the beach to all water activities. A closure may also occur if a school of bluefish are in a "feeding frenzy" in the lifeguarded beach area. Lifeguards will fly a PURPLE "dangerous marine life present" flag.

LOCATING YOUR BEACH GEAR: Do not settle in front of an on-duty lifeguard chair or one that is soon to be opened. This area must be kept clear for equipment. Lifeguards respond quickly to distressed or drowning swimmers. Stay out of this area to avoid an accident or delay a rescue.

WHEN YOU HEAR A WHISTLE: Lifeguards will signal swimmers when they are in or approaching a hazardous area or because they are swimming too far out for adequate supervision.

RIP CURRENTS ARE DANGEROUS: A rip current can carry a swimmer out from shore and be difficult to swim against. Do not panic if you get caught in one. Do not tire yourself out trying to swim against it. Normally, they are not wide. Swim parallel to the shore a short distance, then swim to the shore out of the current. Look for the "Break the Grip of the Rip" sign located at each beach.

BEACH PARKING LOT TRENDS

Coast Guard Beach/Little Creek Tram, Eastham: Tram parking area fills on most holiday weekends; moderate turnover. Beach access via Little Creek Tram and parking area, a half-mile away. Drop-off and pickup of passengers and belongings at the beach are PROHIBITED. Limited handicapped parking (state-issued plate or placard required) at the Coast Guard Station parking area. (360 spaces)

Nauset Light Beach, Eastham: Public parking area fills by 10 AM daily during the summer; minimal turnover. Drop-off and pickup of passengers and belongings at the beach are PROHIBITED. (94 spaces)

Marconi Beach, Wellfleet: Parking area fills during weekends and some weekdays during July and August; moderate turnover. (528 spaces)

Head of the Meadow Beach, Truro: Parking area rarely fills. (285 spaces)

Race Point Beach, Provincetown: Parking area rarely fills during June and July. When the parking area does fill, it is usually one to two hours after Herring Cove fills. Access is also available on *The Shuttle* with $3 park entrance fee. (360 spaces)

Herring Cove Beach, Provincetown: Parking area rarely fills in June. Parking area fills occasionally in July and August; moderate turnover after 1 PM. Access is also available on *The Shuttle* with $3 park entrance fee. Seasonal snack bar. (North area, 140 spaces; South area, 400 spaces)

General Safety and Regulations

National Park Service rangers provide assistance and enforce regulations that protect you and the national seashore. Observe the following:

- Do not disturb natural or cultural features including wildlife; all are protected by federal law. Do not feed wildlife.
- Keep trails, roadsides, and other areas clean. Use trash receptacles and recycle bins, or take trash with you.
- Glass containers, flotation devices (rafts, rubber tubes), snorkels, and masks are prohibited on lifeguard-protected beaches.
- Public nudity is prohibited.
- Surfing, windsurfing, and stand-up paddleboarding are permitted in waters outside lifeguard-protected areas.
- Possession or use of metal detectors is prohibited.
- Permits are required for all beach fires. They may be obtained on a first-come, first-served basis at Salt Pond Visitor Center in Eastham, the Province Lands Visitor Center in Provincetown, and the Oversand Station at Race Point. Do not bury coals. (See campfire information on page 2.)
- Sand collapses easily. Climbing steep slopes or digging deep holes above knee level is hazardous and prohibited.
- Swim only where there are lifeguards, and obey their directions. Lifeguard-protected beaches are marked with signs. Be alert for rip currents and underwater obstacles. Keep children within reach. Use sunscreen to avoid sunburn. Use a waterproof sunscreen if you intend to go swimming.
- Smoking, including electronic cigarettes, is prohibited on protected swimming beaches when lifeguards are on duty.
- Drones are prohibited in the national seashore.
- Biking is prohibited on seashore beaches.

For more information about park regulations, check the Superintendent's Compendium available at www.nps.gov/caco/learn/management

PETS

The national seashore requires that pets be controlled by a leash at all times. Leashes may not exceed 6 feet. Pets are not permitted in public buildings, on lifeguard-protected beaches, on trams, in posted sensitive habitats, on bicycle trails (unless otherwise posted), or on trails except for portions of the Great Island Trail in Wellfleet and the Highlands Woods Walk in Truro.

HUNTNG AND FISHING

Upland wildlife and migratory waterfowl may be hunted in certain areas in season. Federal, state, and local laws apply. Ask at visitor centers for a brochure about hunting, or check http://www.nps.gov/caco/learn/management/hunting-information.htm for more information and maps of open and closed areas.

A license is required for salt and freshwater fishing. Town licenses for shellfishing are required. Regulations and fees vary by town.

TICKS, INSECTS, AND POISON IVY

Take precautions to avoid contact with insects. Deer ticks may carry Lyme and other diseases. Mosquitoes may carry encephalitis or the West Nile virus. Browntail moth "tents" cause skin irritation. Stay on trails, out of tall grasses, and inspect clothes and skin. Use bug spray and wear proper clothing. • Poison ivy is prolific in many locations. The rash it produces can cause severe discomfort. "Leaves of three, let it be."

OVERSAND PERMITS AND SPECIAL PARK USES

Permits for driving on seashore oversand routes are required and available for purchase at Race Point Oversand Station in Provincetown. Oversand permits cannot be acquired for rental vehicles.

Bird-nesting activity, weather, and impassable conditions due to changing beach conditions may require some route closures during the spring and summer.

Call 508-487-2100, ext. 0927 for permit and general information (April 15 through November 15). Call 508-487-2100, ext. 0926, for route closure information, or access the park's website for an up-to-date map of open and closed areas:

http://www.nps.gov/caco/cape-cod-national-seashore-oversand-beach-driving.htm

Special-use permits are required for events, weddings, and commercial filming. Information and applications are on the park's website at http://www.nps.gov/caco/planyourvisit/permitsandreservations.htm.

Watching for Wildlife

Watching for Wildlife

NPS photo

Gray Seals

Gray seals (*Halichoems grypus*) pull themselves out of the water and onto nearby sandbars and the beach to rest. Resting, also called "hauling out," is an important activity.

Human disturbance alters the natural behavior of seals. Noise, sudden movements, and people, boats, or pets getting too close can all disturb seals. When seals are disturbed, they may return to the water as individuals or as a group. Seals that are continually approached never get a chance to rest, leaving them vulnerable to predators and illness.

It's normal for seals to be on land. Seals are semi-aquatic, meaning they often spend a portion of each day on land. Young seals may haul out on land for up to a week. Many seals have scratch marks and scars from hauling out; this is no cause for alarm.

Once hunted to near extinction, seals are now protected under the Marine Mammal Protection Act and National Park Service regulation. It is against the law to disturb or harass them.

Seals consume a variety of fish, shellfish, and crustaceans. They do not eat on land.

Gray seals have been nicknamed "horse heads" because of the long, straight slope of their profile. Males are dark brown, gray, or black with small, lighter spots. Females are tan or lighter gray with darker spots. Males may reach 8 feet in length and weigh over 700 pounds. Females average 6.5 feet and weigh up to 450 pounds.

To protect the seals and to avoid a fine of up to $5,000 or six months in jail:

- Remain at least 150 feet from the seals. In some circumstances it is better to keep even farther away. Move back if the seals begin vocalizing, going into the water, or if all seal eyes are watching you.
- Observe from a distance with binoculars.
- Keep pets on a leash. This is a national seashore regulation. Dogs are likely to startle a resting seal, causing an aggressive, defensive response that might injure your pet, you, or the seal.
- Do not approach haul-out sites in boats or on boards. Kayaks, canoes, and stand-up paddleboards can elicit an alarm response and cause seals to rapidly enter the water.
- Do not swim among seals. Seals can scratch and bite. Also, they are an important prey species for great white sharks that inhabit these waters.

If you see an entangled, sick, or injured seal, call NOAA's Northeast Region Marine Mammal Stranding Network at 866-755-6622.

Cape Cod Great White Shark Safety

SHARK ADVISORY

Great white sharks live in these waters. Sharks prey on seals. Avoid swimming near seals.

Cape Cod's waters are part of a natural and wild marine ecosystem with a rich diversity of sea life, including sharks. Seals are the major prey species for great white sharks (*Carcharodon carcharias*), and as the seal population increases, the great white shark has become more numerous. In recent years, there have been confirmed reports of great white sharks feeding on seals close to shore near swimming beaches. While it is rare for a great white shark to bite a human, it did occur in Truro in 2012.

Be shark smart. To stay safe and to protect wildlife:

- Follow instructions of lifeguards and national seashore staff. Become familiar with the beach flag warning system. Take time to read signs at the beaches.
- Do not swim near seals.
- Swim close to shore, where your feet can touch the bottom.
- Swim, paddle, kayak, and surf in groups.
- Do not swim alone in the ocean at dawn and dusk.
- Avoid isolation.
- Limit splashing and do not wear shiny jewelry.
- Keep your distance (at least 150 feet) from seals, whether they are resting on land or are in the water. It is against the law to disturb them.

Shark Sightings

- Notify a lifeguard if a shark is spotted.
- Beaches will be temporarily closed to swimming or surfing.
- Beach-goers will be notified when they can re-enter the water.

Shark Facts

- Sharks have existed for more than 400 million years.
- As top predators, sharks are critical for maintaining a healthy and balanced marine ecosystem.

Great white shark fin

NPS photo

Other Resources

Massachusetts Shark Research Program
Division of Marine Fisheries:
www.mass.gov/marinefisheries

Global Shark Tracking
OCEARCH:
www.ocearch.org

Supporting Local Shark Research and Education
Atlantic White Shark Conservancy: www.atlanticwhiteshark.org

NPS photo

Piping Plovers

Piping plovers (*Charadrius melodus*) are small shorebirds that winter along the southeast coast of the United States. Each spring, they return to Cape Cod to establish territories and form pairs.

Starting in April and extending into summer, plovers build their nests and lay eggs above the high-tide line, usually in front of the dunes. Their nests are little more than shallow depressions scraped directly into the sand.

The female typically lays four eggs that the male and female take turns incubating. The eggs hatch in about 25 days. Within hours of hatching, the tiny, downy chicks begin learning how to search for food.

Plovers feed by running and darting to catch insects, amphipods, and other invertebrates found on the surface of the sand and mudflats or living in the wrack deposited at the high-tide line. Wrack (washed-up seaweed and marsh grass) is rich in these invertebrates and is an important feature of natural beaches.

Piping plover adults, nests, and chicks all blend into their surroundings to avoid detection by predators. When predators (real or perceived) approach too closely, an adult will run down the beach dragging its wing, as if injured, or call loudly as a distraction. Although this behavior may prevent chicks from being eaten, it leaves the eggs and chicks vulnerable to cold or overheating. For chicks, the stress of running for cover burns calories needed for growth and maturation.

Sharing the Beach with Plovers is Easy if You Know How

At Cape Cod National Seashore, our goals are to protect the park's resources while providing visitors an opportunity to experience and enjoy them in a manner that leaves the resources unimpaired.

- Pay attention to signs and follow the instructions.
- Don't feed wildlife or leave food scraps or trash on the beach; this attracts predators to nesting areas.
- Keep your dog on a leash no more than 6 feet long at all times, and comply with dog restrictions.
- You might see pedestrian detours or be asked to move quickly through areas to minimize disturbance. Please follow the instructions, and in most cases you'll be able to continue your walk without harm to plovers or their young.
- Set up your beach blanket far from posts and strings (symbolic fencing) used to identify suitable shorebird nesting habitat. This fencing minimizes disturbance to nesting plovers from people walking by but not from the prolonged presence of people. Set up several meters away, or choose an area without symbolic fencing.
- Be aware of park rules and regulations regarding boat landing, kite flying, and dogs. If you are uncertain, check at a park visitor center or at the Oversand Office at Race Point Ranger Station.
- Plovers are fascinating! Check out the plover slide show at http://www.nps.gov/caco/naturescience/the-piping-plover.htm
- Learn more about piping plovers and their conservation at http://www.fws.gov/northeast/pipingplover/recplan/index.html
- Bring your binoculars and field guide on your next beach walk to observe and enjoy these birds from a distance.

Watching for Wildlife

Eastern Spadefoot Toads at Cape Cod National Seashore

NPS photo

The Eastern spadefoot toad *(Scaphiopus h. holbrookii)* is one of 12 species of amphibians found at Cape Cod National Seashore. The toad has a plump body with tiny warts; vertically oriented pupils; and a golden, lyre-shaped marking on its back. It owes its name to a spade-like protrusion, called a tubercle, on its hind feet. The toad uses the tubercle to dig burrows, where it spends most of its life, only emerging to breed or feed. Spadefoots emerge on rainy nights in spring and summer, especially when water tables are high and rain is heavy, and move en masse to temporary pools, where they mate. Spadefoots have adapted to these unpredictable, infrequent, and short-lived conditions by being "explosive breeders." Eggs hatch within one week into tadpoles. Tadpoles develop into toadlets in as few as two weeks if they can avoid predators and if their ponds do not dry out.

Data collected by Cape Cod National Seashore's Inventory and Monitoring Program indicate that the Province Lands area supports perhaps the largest concentration of Eastern spadefoot toads in the northeast. Unfortunately, much of this data is based on animals killed on roads on rainy nights. During nighttime road surveys in 2001, almost half of 153 toads found were road-killed. In addition, there are concerns that reduction in groundwater levels may cause ponds to dry out more frequently, further reducing the odds for successful reproduction.

How You Can Help The first step in protecting these threatened toads, as well as other amphibians, is to be aware of their breeding habits and their vulnerability to vehicles. When driving on warm, rainy nights, slow down to avoid running over the many frogs, toads, and salamanders on roadways. Some roads within the park, such as Province Lands Road, may be closed on such nights to protect spadefoots and other amphibians. Please respect these closures to preserve this rare species in one of its last New England strongholds.

Watching Whales from Shore

In spotting whales from shore, often a spout or the back of the whale is all that you will see. Fortunately for those trying to identify whales from land, each species has a unique spout, back, and dorsal fin shape when surfacing.

Humpback whale, *photo courtesy of Provincetown Center for Coastal Studies*, taken under NOAA permit 633-1778.

Perhaps the most common, humpbacks are often seen in groups and exhibit an array of spectacular behaviors from propelling themselves completely out of the water, or "breaching," to tail and flipper slapping. When not engaged in these distinctive behaviors, humpbacks can be identified by their "humped" profile when breaking the surface and by a low, bushy, split spout. They also commonly roll their tail out of the water as they begin a deep dive.

Commonly Observed Birds at Cape Cod National Seashore

excerpts from an article by Robert P. Cook, Ph.D., Wildlife Biologist

Birds are perhaps the most conspicuous and easily observed of the Cape Cod National Seashore's wildlife — at least some species are. The seashore's 44,000 acres provide a wide diversity of freshwater, marine, and upland habitats for the roughly 370 species of birds that occur here. About 80 of these species nest here, during the spring and summer months, with the remainder using the park for migratory stopovers or to overwinter. While some birds are nocturnal, secretive, or well-camouflaged, many species are active and out in the open during daylight hours, providing even the most casual observer an opportunity to observe them. As you go about your activities visiting Cape Cod National Seashore, keep an eye out for these species. They are the "tip of the iceberg," so to speak, of the many bird species that depend on the seashore for food and shelter.

The ***Great Black-Backed Gull*** occurs in eastern North America and western Europe and is the world's largest gull. Along with herring and ring-billed gulls, they are often referred to as "seagulls," which is not quite accurate, since gulls are found on and along the coast, rather than out at sea. Much of the success of gulls is because they are opportunistic in their feeding habits. The great black-backed gull is both an effective predator of smaller water birds and a scavenger. It can be found along the beaches and mud flats of Cape Cod year round.

The ***Common Tern*** is one of four species of terns that nest at the seashore. The others are the diminutive least tern, the endangered roseate tern, and the Arctic tern. Terns are commonly observed patrolling the shallow waters along the beach, hovering and diving down into the water after small fish such as the sand lance. Terns spend their summers here on Cape Cod, nesting in colonies on sandy beaches. Their colonies afford them protection against many predators, which they drive off by collectively dive-bombing. Their use of the beach in summertime makes them vulnerable to disturbance by dogs and humans, and seashore staff protect tern colonies with "symbolic fencing." Please stay out of these areas. Along with our many summer visitors, terns leave Cape Cod in September and migrate down to Central and South America.

While it can be seen on Cape Cod year round, the ***Great Blue Heron*** does not nest here and is most abundant in late summer and early fall. They nest inland in colonial "rookeries" in wooded swamps. After the nesting season, many move to the coast, where they take advantage of the summertime abundance of fish and frogs in our many ponds and marshes. They feed during the day, especially when the tide is out, and spend the night perched together in treetop "roosts."

The ***Red-Tailed Hawk*** is a year-round resident and the most common of the five species of hawks that nest in the seashore. It is a large, broad-winged, fan-tailed hawk, often seen perched in trees along Route 6 or soaring overhead. It hunts for small mammals, such as squirrels and rabbits, and its relative tolerance for humans has allowed it to maintain its numbers in a landscape increasingly dominated by human activity.

While these may be some of the more conspicuous of the seashore's birds, there are many more species awaiting the interested visitor. Checklists and field guides can be obtained at the bookstores at Salt Pond and Province Lands visitor centers.

An Ode to the Understanding of Dragonflies

By Ken Shea, Lead Dragonfly Citizen Scientist, Cape Cod National Seashore

Spring seasons on Cape Cod are typically unremarkable and cooler than most regions in Massachusetts. Yet each spring heralds the return of our first migrant dragonflies traveling from southern regions to breed in freshwater habitats on Cape Cod.

With the arrival of sustained, warmer days, and the onset of summer, resident dragonflies, which have spent the winter here as nymphs in our ponds and wetlands, begin to emerge. These began life up to four summers ago, or even longer, depending on species. Following egg hatching, dragonfly nymphs (larvae) develop through multiple stages. Some nymphs burrow into shallow mud, sand, and wetland sediment; some climb and hide amongst underwater vegetation, while still others simply creep along wetland bottoms in muck or sand.

Hundreds of millions of years ago, dragonflies were part of a formative landscape that preceded dinosaurs. Some ancient dragonflies were enormous, with wings over 2 feet in length. Modern dragonflies and their close relatives, "damselflies," are considerably smaller in size. Scientists believe that this dramatic change was due to a reduction in the content of the high oxygen atmosphere over time.

Today, there are about 450 species of dragonflies documented in North America. Around 168 of them have been found in Massachusetts, and about 105 species inhabit Cape Cod.

Typically found along the wet margins of our local ponds, streams, and wetlands, dragonflies are one of the largest groups of insects and are technically known as "Odonates." We have two sub-groups: "true dragonflies" and "damselflies." True dragonflies are large, corpulent, and robust insects. They are prolific fliers in open areas. During rest, they usually spread their wings horizontally or straight out to their sides. Damselflies are smaller and have very thin, delicate bodies; they are weak fliers and usually hover near the ground just above the surface of water or amongst thick vegetation along pond and wetland edges. While at rest, they usually hold their wings, pressed together, behind their backs. Both sub-groups are collectively referred to as "odes" for short.

One may visit a small pond or wetland on a calm and sunny day in the peak summer months (July-August) to observe dragonflies and perhaps see their unusual activities. Adult dragonflies call for our attention. Their colors are akin to sparkling jewels and sometimes reveal their haunting markings and strange patterns on their wings and bodies. Their extraordinary, unique, and unusual flight patterns capture our imagination. "Odes" possess remarkable dexterity, and are quick, fast, and agile fliers. They hover and fly sideways, backward, or launch vertically upward. They are true visionaries, with remarkable eyesight – the largest, and possibly the keenest eyes in the insect world. They have the ability to see a person when flying toward a person, and still see the person when they fly away. Spectacular eyesight enables them to detect and capture prey at great distances with alarming efficiency. How marvelous to have full field vision!

Dragonflies are important indicators of a healthy environment, and their presence reflects good water quality. They possess economic value as predators and consumers of harmful insect pests, devouring large quantities of flying insects such as gnats, biting flies, and mosquitoes. Typically, an adult dragonfly may consume 10 to 15 percent of its own body weight in prey each day. In the larval stage, odonate nymphs feed opportunistically on all forms of aquatic life including mayfly nymphs, small crustaceans, small fish and tadpoles – almost anything small enough to devour. Odonates can spend upward of two to four years, sometimes longer, depending on the species, as larvae before emerging as adults. Sometimes simultaneous emergence of multiple nymphs can create a massive exodus of ghostly forms (tenerals) as these immature adults attempt to escape consumption by local predators such as fish, birds, and awaiting reptiles and amphibians.

The process of dispersal from aquatic environments to the shelter of forests and uplands to feed and mature before returning to wetland habitats to mate, lay eggs, and die, continues to be a beneficial process for dragonflies that has sustained them for more than 300 million years.

Frequenting the variety of local wetlands might help one to understand how odonates fit into the natural diversity of Cape Cod. The scene is set. Take only a few moments or spend a few hours to witness the incredible variety, spectacular colors, and dazzling aerobatics, choreographed by these ancient insects. The show is free; the effort - effortless!

Absolutely American, Absolutely Democratic: The Grandeur of America's History in our National Parks

By William Burke, *Historian, Cape Cod National Seashore*

The NPS emblem has evolved over the last 100 years. The emblem was a sequoia cone until 1949, when it was decided that it overlooked the agency's historic preservation role. The winning design of a 1949 contest (shown on left) won a $50 prize, but the design was never used. A later sketch submitted from Regional Historian Aubrey Neasham became the inspiration for today's arrowhead patch, which dates from 1952.

Over half of our national parks are dedicated to human ingenuity and hard work, independence and sacrifice, creativity and artistry, and honor and bravery. Parks celebrate immigration, reparation, philanthropy, and civil rights. Park rangers wear an arrowhead shoulder patch to remind us of the critical mission of preserving the human story of our land. As we commemorate the 100th anniversary of the National Park Service (NPS), let's ponder how and why the service is the primary caretaker for our nation's heritage.

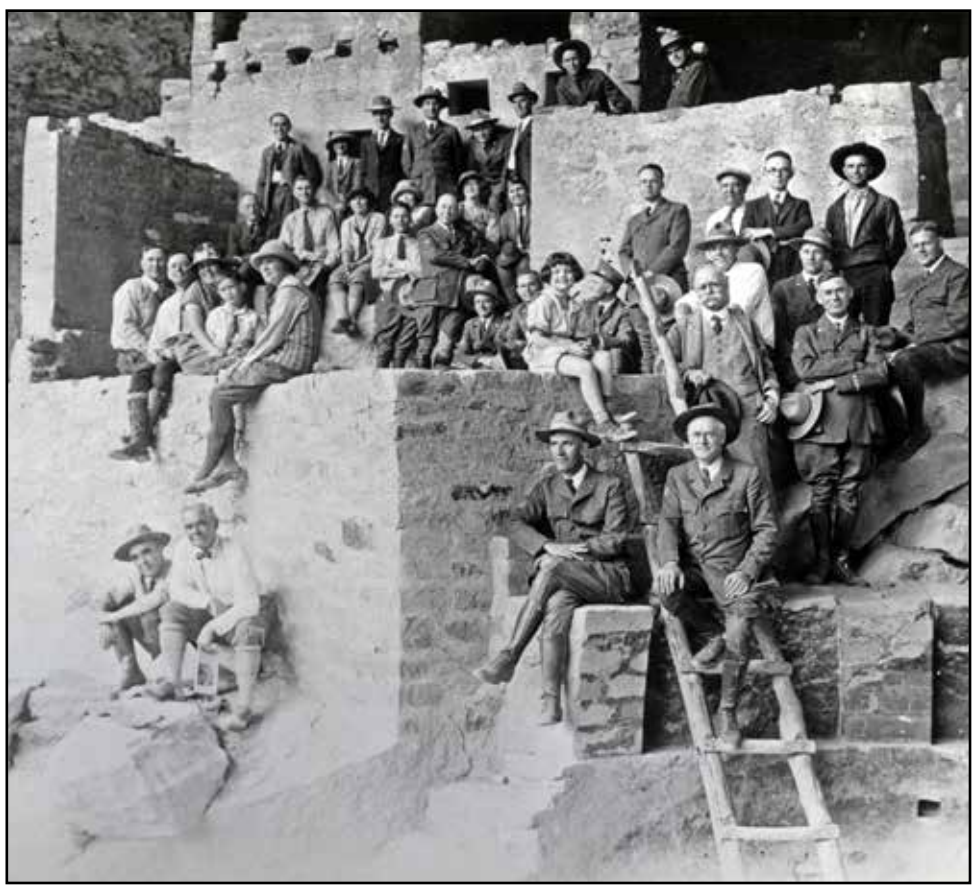
Euphoria Dune Shack sits in the midst of the dune landscape of Provincetown. One of 19 shacks within the Dune Shacks of the Peaked Hill Bars Historic District, it evokes the simpler life of the early Cape. Of the hundreds of other historical landscapes in the NPS, the Cape features several including Fort Hill and the Truro Highlands. ***National Park Service Historic Photograph Collection***

Wild Beginnings in the Wild West

Back in the 1830s, artist George Catlin painted moving scenes of the American West, including images of American Indians and vast areas of immense power and beauty. He envisioned "a nation's park, containing man and beast, in all the wildness and freshness of their nature's beauty." He worried about the destructive effects of America's westward expansion on Indian civilization, wildlife, and wildness. In 1864, with the Civil War ravaging the nation, President Lincoln transferred spectacular Yosemite Valley to the state of California, land that would now "be held for public use, resort, and recreation . . . inalienable for all time." By the end of that century, Yosemite and Yellowstone and a handful of other wild places were designated national parks, and by 1916, a new "National Park Service" had carved nine more parks out of the wilderness, all in the West.

George Catlin was an influential American painter, author, and traveler who specialized in portraits of Native Americans in the Old West. Travelling to the American West five times during the 1830s, Catlin was the first white man to depict Plains Indians in their native territory. Shown is a painting of Stu-mick-o-súcks (Buffalo Bull's Back Fat), considered to be one of Catlin's finest works.

But what of the nation's historic and prehistoric treasures at risk? How could they be preserved for the entire nation? A separate movement arose to protect the prehistoric cliff dwellings, pueblo ruins, and early missions observed by cowboys, Army officers, ethnologists, and other early explorers on the vast public lands of the Southwest. In 1889, Congress authorized the president to reserve from settlement or sale the land in Arizona containing the massive Casa Grande ruin. By 1904, the Department of Interior began a comprehensive review of prehistoric features on federal lands in the Southwest, a survey that became the basis for passage of the Antiquities Act. President Theodore Roosevelt signed into law this act that granted blanket authority for presidents to proclaim and reserve "historic landmarks, historic and prehistoric structures and other objects of historic and scientific interest" as national monuments. Since then, over one quarter of the over 400 national parks of today's system have emerged in whole or part from the Antiquities Act.



Stephen Mather, first director of the National Park Service, poses with park superintendents and their families at Mesa Verde in 1925. Mather was both an industrialist and a conservationist. He led the NPS through its first 12 years, adding parks and monuments and introducing basic amenities and services by allowing concession operations in parks. ***National Park Service Historic Photograph Collection***

The Civilian Conservation Corps (CCC) was a New Deal public work relief program that operated from 1933 to 1942 for unemployed, unmarried men. Thousands of CCC members helped build park roads and facilities, many of which are still in use today. These workers are restoring a totem pole at a park near Sitka, Alaska. ***National Park Service Historic Photograph Collection***

"Cumulative Expressions of a Single National Heritage"

The NPS preserves thousands of archeology sites, including the site of the earliest pottery enterprise in Colonial America in Yorktown, VA. Dr. Norman F. Barka, principal investigator for that site, holds a stoneware mug found at the site during the Bicentennial in 1976. ***National Park Service Historic Photograph Collection***

Ranger Carole Scanlon poses beside the Liberty Bell in 1972 as part of the "Grand Public Unveiling" of the new women's uniform. Perhaps the most iconic symbol of independence in America, the bell is part of a significant collection of objects and buildings in Philadelphia, aptly named Independence National Historical Park, established July 4, 1956. ***National Park Service Historic Photograph Collection***

Over the next three decades, it became clear that an organized system of inventorying and managing historic resources was needed. Beginning in 1933, when the executive branch was reorganized, the War Department authorized the immediate transfer of 44 historical areas to the service – 13 east of the Mississippi - including Gettysburg Battlefield. National capital parks of Washington D.C., like the Lincoln Memorial, as well as national monuments held by the U.S. Forest Service, were all placed under the umbrella of the NPS. In the wake of this vast reorganization, the Historic Sites Act of 1935 was the first assertion of historic preservation as a public duty, empowering the service to preserve for public enjoyment a vast collection of historically significant places and objects. Now historic preservation was a primary mission of the service with limitless potential to seek areas representing all aspects of America's past, not just places of presidents and battlefields.

The Great Depression and World War II dampened the addition of historic sites to the service, but beginning in the 1950s until the present, new sites representing untold stories emerged: C&O Canal, Lowell, and Paterson Great Falls tell the stories of commerce, industry and labor; African-American sites commemorate George Washington Carver and Martin Luther King, Jr.; art and literature sites celebrate Muir, Saint-Gaudens, and Longfellow; and sites of remembrance were created at the USS Arizona, Manzanar internment camp, and Flight 93.

Cape Cod: A New Breed of Park

Cape Cod Cape Cod National Seashore, born out of the service's post-war goals to introduce America's most urban populations to the fresh air of national parks, was one of the first national seashores (1961). To create a national park that would complement, but not overpower, a place already steeped in tradition and culture, the service's innovative approach included a citizen's advisory commission, suspended eminent domain, and provided federal funds to acquire excess private lands. Like all other units of the National Park System, preserving history and culture would be an essential mission of this national seashore. Its history can be found all around you. So climb majestic lighthouses, golf at the historic golf links, stay in a rustic dune shack, and tour a whaling captain's house. By exploring and learning about the national seashore's history, you will become part of the rich legacy of the human experience here.

The Aztec Ruins National Monument preserves ancestral Puebloan structures in New Mexico. George Grant, first chief photographer of the NPS, snapped this photograph of park rangers in front of a reconstructed Native American kiva in 1940. Grant travelled the West, capturing over 40,000 images in a specially outfitted panel truck - part darkroom and part camper - that he endearingly called "the Hearse." ***National Park Service Historic Photograph Collection***

The National Park Service preserves iconic objects like the Fort Sumter garrison flag. This 1981 image shows textile conservationists performing a preliminary condition assessment. The flag was lowered by Major Robert Anderson during the surrender of Fort Sumter in 1861, and was raised by Anderson four years to the day after the surrender as part of the celebration of Union victory. ***National Park Service Historic Photograph Collection***

By the Numbers:

Cape Cod National Seashore's Cultural Resources

Archeology Sites: **236**
Historic Buildings: **78**
Museum Objects: approx. **500,000**
Landscapes: **8**

Historic Buildings at Cape Cod National Seashore

The Penniman House, 70 Fort Hill Road, Eastham

The Penniman House, completed in 1868, was styled after the French Second-Empire period. It included every known comfort of the day and many innovative ideas. The Captain Edward Penniman family enjoyed this fine home for nearly 100 years. *Directions:* Take Route 6, approximately 1 mile north of the Orleans rotary, at Fort Hill. Seasonal tours and open houses. Limited parking.

Nauset Light, intersection of Ocean View Drive and Cable Road, Eastham

Nauset Light, moved back from the eroding bluff in 1996, remains a navigational aid. Nauset Light Preservation Society volunteers maintain the light and conduct tours on Sunday afternoons in late spring and early fall, and on Sunday, Tuesday, and Wednesday evenings in July and August. Free, donations accepted. www.nausetlight.org. *Directions:* Take Route 6 to the traffic light at Salt Pond Visitor Center at Nauset Road and follow signs to Coast Guard and Nauset Light beaches. Park at Nauset Light Beach.

The Three Sisters Lighthouses, Cable Road, Eastham

In 1838, three brick towers were built in a row 150 feet apart on the cliffs of what is now the Nauset Light Beach area. Known as the Three Sisters, the original brick towers fell victim to erosion in 1892 and were replaced with three movable wooden towers that are now arranged in their original configuration off Cable Road. Seasonal tours and open houses. Located ¼ mile west of Nauset Light on Cable Road.

Atwood-Higgins House, 269 Bound Brook Island Road, Wellfleet

The Atwood-Higgins House is a fine example of a properly framed Cape Cod cottage, which grew from a half-house in the early 1700s to a full-Cape with eight rooms by the 19th century. The oldest house owned by the national seashore, it is flanked by an eclectic collection of later-vintage buildings. *Directions*: Take Route 6. Turn onto Pamet Point Road in Wellfleet at the Truro town line. Take Pamet Point Road and follow signs to Atwood-Higgins. Seasonal tours. Limited parking.

Pamet Cranberry Bog House, 86 North Pamet Road, Truro

Originally constructed around 1830, the Bog House is located among former cranberry bogs in the Pamet Valley. It supported cranberry harvesting that occurred there until the 1960s. Views of the house can be seen from atop Bearberry Hill. *Directions:* Follow North Pamet Road in Truro, off Route 6, to its end. Limited parking.

Highland House, 27 Highland Light Road, North Truro

The Highland House Museum is located in the historic Highland House, a former hotel built in 1907. Step back in time as artifacts, images, historical documents, exhibits, and programs explore stories of Native People, early Truro, maritime history and industry, and early tourism. Operated by the Truro Historical Society and open Mondays through Saturdays from late spring to early fall. $5 adults, $4 students, free for 12 and under. $1 discount with same-day admission to Highland Light. www.truruhistoricalsociety.org. *Directions:* Take the Cape Cod Light exit, Route 6, onto Highland Road, and follow signs.

Highland Light, 27 Highland Light Road, North Truro

The first lighthouse on Cape Cod was erected in 1797 in Truro. The original Highland (Cape Cod) Light was eventually replaced by the current tower, built in 1857. Operated by Eastern National, the lighthouse and keeper's shop are open daily spring through fall. $6 for adults, $5 for seniors and students. Children must be 48 inches tall to climb the tower. $1 discount with same-day admission to Highland House Museum. www.highlandlighthouse.org. *Directions:* Take the Cape Cod Light exit, Route 6, onto Highland Road, and follow signs.

Old Harbor Life-Saving Station, 191 Race Point Road, Provincetown

At Old Harbor, the National Park Service interprets the dramatic story of shipwrecks and the role of the U.S. Life-Saving Service in preventing shipwrecks and performing rescues. During the summer, re-enactments of the historical breeches-buoy drill are performed weekly. Seasonal open house. *Directions:* Take Route 6 to Race Point Road in Provincetown. Park at Race Point Beach. *Beach fee may apply.*

Every Kid in a Park for Families

by Barbara Dougan, *Education Specialist*

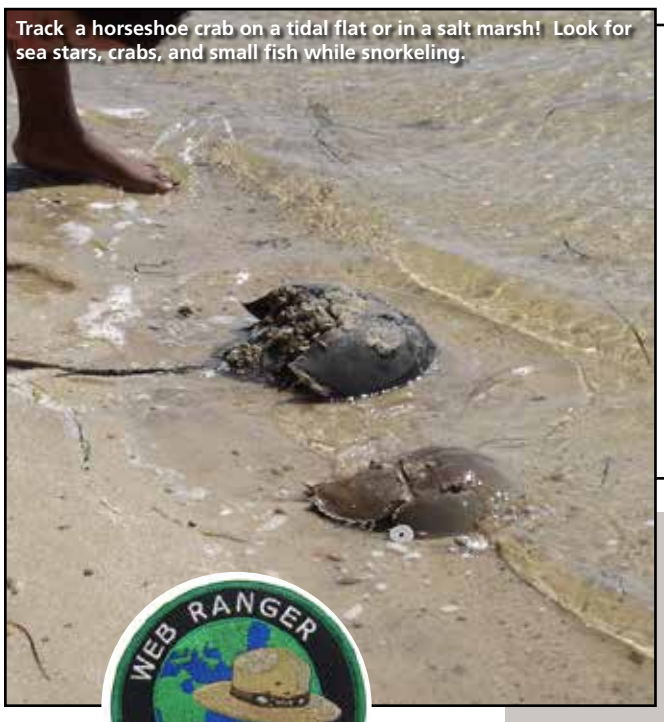
Fourth-graders and families of kids of any age . . . these activities are for you!

Atlantic White Cedar Swamp Trail, Marconi Station Site Area, Wellfleet.

Take a hike! Cape Cod National Seashore has 12 hiking trails and miles of fire roads and shoreline to explore. See page 9 for a trail list. While hiking, try one of these fun ideas:

- Have an eye-spy contest with family members. Who can spot the most animals- insects, birds, mammals, and more!
- See which family member has the most sensitive touch. Roll soil between your fingers to decide if a soil has clay (feels smooth, like flour), sand (feels gritty), or loam (feels soft, smooth, and forms a ball when squeezed).
- Find out which family member makes the best human thermometer! Which of you can find the coolest spot and the warmest spot when hiking through an area? What caused the temperature differences?

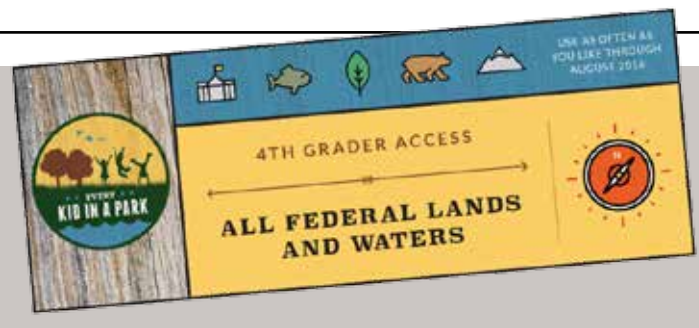
Remember to stay on trails to limit your exposure to poison ivy or ticks. For more information, ask at a visitor center.



Track a horseshoe crab on a tidal flat or in a salt marsh! Look for sea stars, crabs, and small fish while snorkeling.

Step into history! Walk through a whalebone gate to a whaling captain's home. Check out boats in a life-saving station. Climb the spiral staircase of a lighthouse. Imagine the people who came before you—what was it like to live and work in the building? Visit the Marconi Wireless Station Site where Marconi sent the first trans-Atlantic wireless from the USA to Europe on January 18, 1903. Only remnants of the buildings and radio towers remain, but it does not change the fact that something happened in this location that changed the world. Make a wireless cell phone call to someone far away just like Marconi did from this location.

Grab a paddle or go for a swim! Rangers lead canoe trips in July and August. Obtain a schedule at a visitor center. Grab your boogie board and go wave surfing at your favorite beach. Swim while lifeguards are on duty, and read safety notices at beaches. Snorkel in a pond and look for fish. Rent or take your own kayak to a marsh at low tide. Keep an eye out for crabs, eels, sea stars, and more! Be sure to wear a personal flotation device (PFD) to stay safe.



Calling all fourth-graders! Get your free "Every Kid in a Park" pass!

On September 1, 2015, President Obama launched a historic initiative with an ambitious goal: to bring every fourth-grader and their family to one of our nation's national parks or other federal public lands and waters through August 2016. The goal is to inspire fourth-graders to become the next generation of visitors, supporters, and advocates for our nation's rich heritage and breathtaking landscapes. This initiative, in collaboration with the National Park Service and the National Park Foundation, coincides with the Centennial year of the National Park Service. Because the program has been so successful in 2016, it is being continued in 2017.

Students can obtain a free entrance voucher to federal public lands by visiting www.everykidinapark.gov, playing a game, then downloading and printing a personalized voucher. Bring your voucher to a park visitor center and exchange it for a uniquely designed credit card-sized plastic pass. The pass covers entrance and standard amenity fees for the holder, siblings under 16, and up to three adults in the same car at all federal lands and waters through August 31, 2017. This includes the six national seashore beaches! The voucher does not cover expanded fees for things such as camping, special tours, special permits, and boating. Please inquire at the location you will be visiting for more information on acceptance.

The national seashore will accept the paper vouchers at the beach entrances. Optionally, fourth-graders may take the paper voucher to a national seashore visitor center to exchange for the plastic pass to use here and at other parks through August 2017.

Become a Junior Ranger

. . . a park protector, a planet caretaker, a leader! Join a growing group of young people who are interested in the natural world and history. Stop at a visitor center to request a free Junior Ranger booklet. After completing the activities and attending some ranger programs, return to a visitor center to receive your patch or badge.

Interested in learning even more about the seashore? Ask the rangers at the visitor centers about borrowing an Explorer Pack. The pack is full of guides and tools for in-depth investigation into the science and history of the national seashore.

For more Junior Ranger fun when you return home, check out Web Rangers at www.nps.gov/webrangers.

Self-Guiding Trails

Nauset Marsh *NPS/Mechling*

Beech Forest *NPS/Keohan*

Atlantic White Cedar Swamp Trail *NPS/Keohan*

• Self-guiding trail folders with information on specific features are available at some trailheads. • Pets and bicycles are prohibited on self-guiding trails year round except as noted. • Natural and archeological features are protected by federal law and must remain undisturbed. • Taking, feeding, or harassing wildlife is prohibited.

Fort Hill Trail, Eastham

Length: 1-mile loop, one hour. **Location:** 70 Fort Hill Road. Turn off Route 6 at the brown Fort Hill sign on Governor Prence Road. Continue to the parking area on the left across from the Penniman House. The trail may also be accessed from Hemenway Landing, just north of Fort Hill on Route 6. **Features:** This loop trail crosses open fields, connects with the Red Maple Swamp Trail, and offers vistas of the Nauset Marsh area. **Conditions:** Easy; some log steps on slopes; seasonal restrooms near Hemenway Landing.

Red Maple Swamp Trail, Eastham

Length: .8 miles round trip, 30 minutes. **Location:** 70 Fort Hill Road. Enter this trail from the Fort Hill Trail or Hemenway Landing, just north of Fort Hill on Route 6. **Features:** Boardwalk sections of this trail meander through the heart of the Red Maple Swamp. *Due to deterioration, much of this trail is closed. A small section of boardwalk through a fine example of red maple swamp is open from the junction with the Fort Hill Trail. Repairs to this trail will begin in fall 2016.* **Conditions:** Moderate difficulty; seasonal restrooms near Hemenway Landing.

Buttonbush Trail, Eastham

kid-friendly trail

Length: .3-mile loop, 15 minutes. **Location:** 50 Nauset Road, adjacent to Salt Pond Visitor Center amphitheater, off Route 6. **Features:** This trail, which includes guide rope, text in braille, and large print, involves all the senses as it winds through forest, crosses over the Buttonbush Pond on a boardwalk bridge, and traverses formerly cultivated areas. *Ask at the Salt Pond Visitor Center for a fun activity guide to take along.* **Conditions:** Easy; some log steps on the second half of trail; moderate grade; restrooms at visitor center.

Nauset Marsh Trail, Eastham

Length: 1.3-mile loop, plus spur to Coast Guard Beach, one hour. **Location:** 50 Nauset Road, adjacent to Salt Pond Visitor Center amphitheater, off Route 6. **Features:** This trail winds along the edge of Salt Pond and Nauset Marsh, crosses

Nauset Marsh Trail, ***continued***

fields and returns to the visitor center through a recovering forest. There are several spectacular vistas along the way. Conditions: Easy; some log steps; moderate grade; use caution when crossing the bike trail; restrooms at visitor center parking area. *Sections may be submerged at highest tides. Check at visitor center for conditions.*

Doane Trail, Eastham ♿

Length: .6-mile loop, 30 minutes. **Location:** Doane picnic area, on Nauset Road, 1 mile east of Salt Pond Visitor Center (leading to Coast Guard Beach). **Features:** This paved, wheelchair-accessible trail with interpretive text winds through an emerging pine and oak forest and offers vistas of Nauset Marsh. A picnic area is adjacent to the parking area. **Conditions:** Easy; wheelchair-accessible grade (also good for strollers); seasonal restrooms. *2-hour parking limit.*

Atlantic White Cedar Swamp Trail, Wellfleet

Length: 1.2-mile loop, one hour. **Location:** 195 Marconi Station Road. At stop light, turn east off Route 6 into the Marconi Station Area, South Wellfleet. Follow brown signs to the Marconi Site and White Cedar Swamp. **Features:** This trail descends through a stunted oak and pine forest into a mature woodland, leads to a boardwalk that winds through the picturesque Atlantic White Cedar Swamp, and returns via the historic "Wireless Road" (a sand road) to the starting location. **Conditions:** Moderate difficulty; some steep stairs; return route is ½ mile in soft sand; swamp portion of this trail is boardwalk; seasonal restrooms.

Great Island Trail, Wellfleet

Length: 3.9 to 8.8 miles round trip (3.9 for tavern loop round trip to parking area; 8.8 for round trip to Jeremy Point overlook and including tavern loop). Allow three to five hours to explore Great Island. **Location:** Corner of Chequessett Neck and Griffin Island roads. From Route 6, follow green signs to Wellfleet Center; turn left onto East Commercial Street (follow signs to Wellfleet Harbor); continue along the shoreline from the town pier via Chequessett Neck Road to the Great Island parking area. (Keep the water view on your left after leaving Route 6.) **Features:** This trail follows sandy stretches between the elevated heights of Great Island and Great Beach Hill. Its higher elevations punctuate spectacular vistas, which emerge from an even-aged, pitch-pine forest. Part of this trail leads to a colonial-era tavern site (no

Great Island Trail, ***continued***

remains visible). Other sections skirt salt marsh embayments. A picnic area is adjacent to parking area. **Conditions:** Difficult; mostly soft sand; some log steps; portions are submerged at high tide; hats, sturdy footgear, and drinking water are advisable; seasonal restrooms.

Caution: Trail options can be confusing.

- Check tide table. Do not attempt to walk to Jeremy Point if the tide is rising.
- This trail does not provide direct access to the beach.
- Do not traverse dune to reach beach (enforced).
- Stay on designated trails to protect fragile resources.
- Leashed dogs are permitted along portions of the trail as indicated by signs.
- Temporary detours and closures may be in effect during shorebird nesting periods.

Pamet Area Trails, North Truro

Length: .6 miles each way, plus extensions, 45 minutes. Adjacent fire roads offer additional miles for walking. **Location:** 111 North Pamet Road. Take Truro Center/Pamet Road exit off Route 6 in Truro. Proceed 1½ miles on North Pamet Road to the end. Trail begins at the parking area adjacent to the Environmental Education Center (a hostel in summer). **Features:** Spectacular views of the Pamet landscape, the Atlantic, the glacial terrain of the Pamet valley, and a former bog house. Outdoor exhibits and a folder keyed to trail markers describe the area. **Conditions:** Moderate difficulty; log steps; steep grade to overlook. No restrooms.

Woods Walk at Highlands Center, North Truro

Length: 1 mile, 30 minutes. **Location:** 43 Old Dewline Road. Take Route 6 to the Highland Light exit in North Truro. Go east on Highland Road. Turn right onto South Highland Road. After .6 miles, turn left onto Old Dewline Road and go to the end. **Features:** Winding through the back woods of the emerging Highlands Center for arts, science, and education, it offers a glimpse of the Cold War past amidst forest, heathlands, and ocean bluffs. **Conditions:** Moderate difficulty; a mix of paved and unpaved roads; sections with fairly steep terrain. No restrooms. Leashed dogs permitted.

Small's Swamp Trail, North Truro

Length: .6-mile loop, 30 minutes. **Location:** In North Truro, turn right off Route 6, 1.2 miles past the brown Head of the Meadow Beach sign on the right, at the Pilgrim Heights sign. Walk begins and ends at the covered picnic shelter. **Features:** Chosen by Native people for living sites for thousands of years for water, protection, and food sources, early-European settlers sought to make a living on this landscape. Gradually, the soil gave out, and farms were abandoned. The forest now hides most, but not all, of the former land uses. **Conditions:** Easy; some log steps; moderate grade; short boardwalk surface; picnic area and seasonal restrooms in adjacent parking area.

Pilgrim Spring Trail, North Truro

Length: .7-mile loop, 30 minutes. **Location:** In North Truro, turn right off Route 6, 1.2 miles past the brown Head of the Meadow Beach sign on the right, at the Pilgrim Heights area sign. Walk begins at the covered shelter. Upon exiting the trail near the restrooms, proceed ahead across the parking area to your vehicle. **Features:** Path leads to a site representative of where the Pilgrims drank their first fresh water in New England. This short loop trail winds through recovering forest and passes a marker that commemorates the Pilgrims' initial exploration of the area. **Conditions:** Easy; some log steps; moderate grade; picnic area and seasonal restrooms in parking area at end of trail.

Beech Forest Trail, Provincetown

Length: 1-mile loop, (pond loop ¾ mile, extension loop ¼ mile), one hour. **Location:** 36 Race Point Road. Turn right (north) at the traffic light on Route 6 onto Race Point Road. Proceed approximately ½ mile to the Beech Forest parking area on the left. **Features:** This trail provides a journey into the heart of a picturesque beech forest and offers great bird-watching opportunities. It skirts the shallow Beech Forest Pond. **Conditions**: Easy; extension loop has steep log steps; some soft sand; picnic area and seasonal restrooms at trailhead; access to Province Lands Bicycle Trail and designated pet trail from parking area.

Remain on designated trails to prevent damage and reduce exposure to disease-carrying insects, poison ivy, and other natural risks. Observe trail conditions and be aware of naturally occurring hazards.

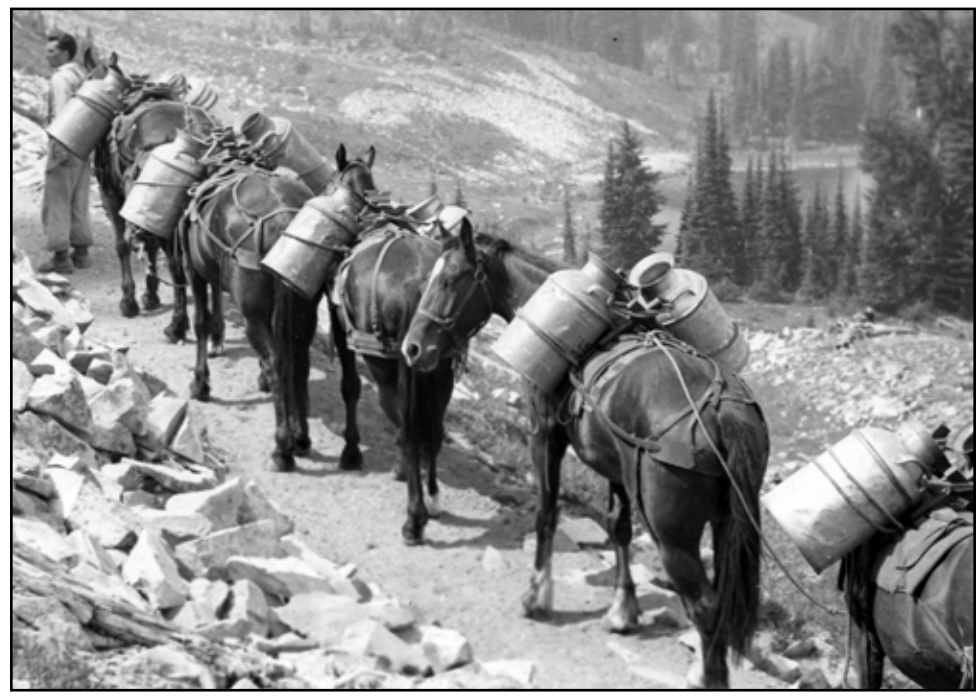
History and Evolution of Natural Resource Management Policy and Practices in the National Park Service

Robert P. Cook, *Wildlife Ecologist, Cape Cod National Seashore*

As we celebrate the 100th anniversary of the National Park Service's founding, in a nation and world where national parks are now a well-established concept, it's easy to forget how innovative the idea was. The creation of national parks was the culmination of 19th-century philosophical and artistic movements that viewed nature in terms of aesthetic values and as a source of inspiration, rather than a force to conquer and exploit. These views emerged as America's westward expansion was reaching its climax, and industrial age development, technology, and population growth were beginning to dominate and alter nature. Early park supporters recognized these forces and foresaw the loss and destruction of some of our most scenic and wild landscapes. For them, the goal of national park creation and management was to preserve these lands so Americans could enjoy and be inspired by their natural features and dramatic scenery.

This began in 1872, with the establishment of Yellowstone National Park. However, it wasn't until 1916 that the National Park Service (NPS) was created to manage the growing number of national parks. For those parks, the Organic Act declared that the fundamental purpose was "to conserve the scenery and the natural and historic objects and the wild life therein, and to provide for the use and enjoyment of the same in such manner and by such means as to leave them unimpaired for future generations."

With this dual mandate, the NPS began formulating policies to manage the national parks in its care. Initially, NPS natural resource management policies and practices were a continuation of those already in place. These reflected the state of ecological knowledge, which was in its infancy, and the social values of the times. The idea of setting aside large tracts of undeveloped land for the preservation and enjoyment of nature was fairly radical and not supported by the logging, mining, livestock, hunting, and fishing interests of the time. For the National Park Service to succeed in this political climate, it needed to demonstrate the economic value of national parks as recreational resources. Thus, national parks were managed to serve a utilitarian purpose—nature-based tourism to observe and enjoy natural landscapes, scenery, and wildlife. To do this required development of roads, trails, hotels, and other facilities to accommodate tourists.



Early NPS managers promoted sport fishing by stocking native and non-native fish, even into lakes that were naturally fishless, which had profoundly negative impacts on other species, such as amphibians. ***National Park Service Historic Photograph Collection***

George M. Wright's early studies of national park wildlife refined the concept of "unimpaired" in ecological terms and called for basing natural resource management policy on scientific research. ***National Park Service Historic Photograph Collection***

Although not originally expressed in ecological terms, the fundamental idea of national parks was to nurture and protect nature, and early policy assumed that lack of development meant natural conditions existed and parks were "unimpaired." Thus, the NPS devoted most of its energy to tourism development, and natural resource management consisted of protecting park scenery from development, fires, and insects, while promoting and enhancing species favored by visitors. Fishing was promoted via stocking programs, and NPS hatcheries reared and released both native and non-native species, often in waters that were naturally fishless. Large mammals such as bears, bison, elk, and antelope were considered the species visitors wanted to see. To favor them, the NPS fed them in winter, protected against poachers, and conducted predator eradication programs. As a political concession, early NPS policy also allowed cattle grazing in backcountry areas away from visitors.

Natural resource management policy in the NPS is now science-based, but its evolution from those early days was a slow one, reflecting the maturation of ecology as a science, the environmental movement and its resultant national policies, and changes in how the NPS and the American people view the purpose of national parks. In the 1920s, the Ecological Society of America voiced opposition to releasing non-native species in national parks, and the New York Zoological Society and others expressed concern over eliminating predator populations, noting the resultant overpopulation of grazing mammals and damage to native plant communities. Similarly, as ecologists came to understand the role of natural fire and native insects in ecosystems, early NPS forestry policies were questioned. There were calls, from within and outside the NPS, for scientific research to better understand natural processes and to use it as the basis for policy- and decision-making.

Up to this point, the NPS had relied on experts from outside agencies such as the Forest Service and Bureau of Fisheries, and did not see the need to develop its own expertise. This attitude began to change, and in 1929, George M. Wright, an independently wealthy park naturalist at Yosemite, embarked on a self-funded study of national park wildlife. Wright supervised a team of biologists in what became the "Wildlife Division," publishing its first report on park wildlife in 1933. This report noted many problems with the condition of park natural resources and wildlife populations, including the absence of large native predators from most national parks, degradation of native plant communities from overgrazing, and the encroachment of many non-native species. The report recommended scientific research, ecological restoration, protection of predators and endangered species, reduction or eradication of non-native species, and acquisition of more ecologically complete wildlife habitats. It also articulated a new vision of national park purpose, "to preserve flora and fauna in the primitive state," and viewed the concept of "unimpaired" in ecological terms.

Under George Wright's supervision, NPS biologists slowly began to be integrated into NPS planning, operations, and decision-making. Unfortunately, Wright's death in an automobile accident in 1936 was a major setback to institutionalizing the new natural resource management policies, and they would be applied inconsistently until the early 1960s. During this period, fish and wildlife management became more ecologically based, but forest management was not. Meanwhile, the science of ecology was developing rapidly and maturing, and NPS natural resource management policies and practices were falling behind ecological knowledge. During this same time period, the national parks system was expanding to include many more historic parks and recreation areas, and the NPS was pursuing a new program of major development to celebrate its 50th anniversary in 1966.

Known as "Mission 66," this program of road and facilities development would re-ignite longstanding concerns among ecologists, conservation groups, and some NPS staff that there was too much emphasis on recreational tourism and not enough science or concern for ecological impacts of park development. As the "environmental movement" dawned, these concerns culminated in a number of in-house and external "blue-ribbon panels" that reviewed the state of national park natural resources and their management, and the policies and science programs that guided them. Most influential of these was a 1963 report known as the "Leopold Report," after committee chairman A. Starker Leopold, a prominent wildlife ecologist and son of conservation science pioneer Aldo Leopold. Leopold's report refined thinking on national park

continued on next page

Early managers of national parks assumed that scenic beauty meant "unimpaired" nature and focused on building public support for national parks through developing parks for outdoor recreation and tourism. ***National Park Service Historic Photograph Collection***

purpose and management for decades to come. It focused on the philosophy of park natural resource management and the ecological principles involved, urging that park management be based on scientific research.

In words that harken back to George Wright's ideal of preserving flora and fauna in a primitive state, the Leopold report recommended that the primary goal of natural resource management be to maintain, or where necessary re-create, the ecological conditions that existed at each park at the time of European arrival: a "vignette of primitive America" in which native species were present in maximum variety and reasonable abundance. Thus, Leopold helped complete the shift toward ecological management of national parks that Wright had begun, emphasizing the whole ecosystem and natural processes. This focus has, as its ideal, a native ecosystem, unaltered by modern humans, driven by the natural forces that created and maintained landscape variability and native species biodiversity. Both Wright and Leopold knew that their ideal was not fully attainable, due to recent human activity, but they knew it was important, nonetheless, to provide the direction and goals for policy and management.

NPS policy now defines the "natural condition" that national parks strive to protect as "the condition of the resources that would occur, in the absence of human dominance of the landscape." We now recognize that few national parks fully meet this definition, but, in spite of past human impacts, without national parks to protect and conserve nature and wildness, there would be less of it remaining, and fewer opportunities to experience it and restore it.

Restoring tidal flow to the Herring River system will help reverse negative impacts to the site's original salt marsh, reduce invasive alien plants, and make it easier for river herring to migrate. ***NPS photo***

The history of natural resource management here at Cape Cod National Seashore mirrors the evolution of NPS policy and practices and, in some cases, has helped shape them. Established in 1961, the seashore began operations at the dawn of the "Leopold era," with its growing emphasis on scientific research to understand park ecosystems and inform policy and decision-making. One manifestation of this was the University of Massachusetts Cooperative Park Studies Unit. Established in 1973, this group of ecologists and geologists studied kettle pond ecology, nesting shorebirds, beach and dune vegetation, landscape history, and ORV impacts, leading to improved protection of park natural resources still in effect today. Perhaps even more significant were its studies of beach dynamics and coastal geology, which increased understanding of the natural processes of erosion, accretion, and constantly shifting sands. This became the basis for official NPS policy, which is to not interfere with natural shoreline processes. The loss of the Coast Guard Beach parking lot and bathhouse, built in 1964 by the NPS, to the Blizzard of 1978 reinforced the wisdom of this policy and has heavily influenced seashore and NPS thinking and planning since. Our new bathhouse at Herring Cove, designed for storm waters to flow under and to be moved back as sea level rises, embodies these policies.

Studies of coastal processes at Cape Cod National Seashore helped lead the NPS to a policy of not interfering with coastal processes. Under this policy, facilities such as the bathhouse at Coast Guard Beach, Eastham, destroyed by a nor'easter in 1978, are no longer considered sustainable. ***Photo by Jim Owens***

NPS policy seeks to preserve each park's native species diversity. The seashore's beaches have long been used for nesting by least terns, and the national seashore protects this Massachusetts "Special Concern" species from human disturbance. ***Photo by Joan Miller***

Cape Cod National Seashore has been in the vanguard of evolving natural resource programs and policies in other ways. It was among the first parks to begin a fire ecology program, with prescribed fire being used as a management tool as early as 1976. It was also one of the first parks to have natural resource management specialists and research scientists on its staff and to create a Division of Natural Resources and Science. The late 1990s "Natural Resources Challenge" created the Cape Cod Ecosystem Monitoring program and the Atlantic Research and Leaning Center, greatly expanding the number of seashore staff involved in science and natural resource management. These developments were the realization of policy recommendations dating back to George Wright and have greatly expanded knowledge of the seashore's natural resources and its ability to take on the challenges of protecting and restoring them.

With policies that focus on protecting existing ecological integrity and restoring it, to the extent possible, where it has been diminished, seashore staff from all operations, regardless of job title, work in numerous ways toward that ideal. Efforts include protecting lands from further development; documenting the status and condition of park resources; researching sea level-rise effects on salt marshes; protecting endangered species and native biodiversity, such as populations of nesting and migrating shorebirds; removing non-native, invasive plants; and restoring tidal flow to salt marshes that were altered historically.

Here at Cape Cod National Seashore, natural resource management policies are now based on well-established ecological principles and accepted practices of science-based conservation biology and natural resource stewardship, and the seashore has a highly regarded science and natural resource management staff. Yet, while our knowledge and capabilities have grown, so have the challenges. Prior to its establishment, when the seashore was being discussed in Congress, its purpose was described as "conserving the values which now make Cape Cod so attractive to so many people and which are in such great danger of being lost – its scenery, its historical associations, its reminders of an older and quieter way of life than most of us now enjoy, its wildlife and flora." Although the national seashore has largely been successful in preserving park natural resources, it will take constant effort to maintain this over the long term. With the support, understanding, and cooperation of seashore visitors and neighbors, we can help ensure that the seashore's exceptional natural resources will continue to educate and inspire future generations.

Seashore staff count salamander egg masses in a vernal pond. Long-term monitoring enables the park service to evaluate success in preserving and protecting a park's ecological integrity.
NPS photo by Robert Cook

The National Park Service Centennial

George Price, *Superintendent*

August 25, 2016, marks the 100th anniversary of the establishment of the National Park Service (NPS). Thirty five parks and monuments had been established by 1916, with Yellowstone being the first in 1872. Americans felt it was appropriate to manage this growing system of parks under a single professional agency. The NPS Organic Act mandated this new agency " . . .to conserve the scenery and the natural and historic objects and the wild life therein to provide for the enjoyment of the same in the same manner and by such means as will leave them unimpaired for the enjoyment of future generations."

There are now over 400 national park areas, encompassing dramatic natural wonders and compelling cultural sites. Areas managed by the NPS range from Native American sacred places and European settlements to Civil War battlefields and presidential birthplaces and homes. In recent decades, sites that transcend a specific place in time have been designated, including Lowell National Historical Park, which represents the processes and consequences of the Industrial Revolution; Women's Rights National Historical Park in Seneca Falls; Manzanar National Historic Site, which was an internment camp for Japanese-American citizens during WWII; and Martin Luther King, Jr. National Historic Site, which tells the story of the birth of the modern Civil Rights Movement.

In the early years, the NPS ranger was a generalist, a "jack of all trades"—with the same folks enforcing laws, educating visitors, and maintaining trails. However, as the park system grew and became more diverse, specialized skills were needed to manage these varied resources, which range from complex natural ecosystems at the Great Smoky Mountains to ancient cliff dwellings at Mesa Verde. Most visitors to national parks are familiar with the park rangers who welcome visitors and collect fees at park entrances, answer questions in visitor centers, and lead hikes, sharing the significance of the park with the public. Other familiar park rangers are those who respond to emergencies and enforce regulations intended to keep the public safe and protect park resources from damage. Also in the public eye are the maintenance staff who keep park facilities clean and maintain park trails. However, for every staff person who is the face of the NPS to the public, you can be certain there are many working behind the scenes. These include historians, curators, GIS specialists, archivists, preservation specialists, planners, botanists, wildlife biologists, plumbers, electricians, and administrative staff. In many ways, a park is like a municipality, with many working parts. Underlying every task that we do is the understanding that we are helping to protect resources and are serving the public, as the 1916 act mandates.

In the last 100 years, the NPS has evolved as our understanding of best management practices for our nation's premier natural and cultural sites has grown. Some of the agency's early actions, including the removal of predators, interrupting natural processes, and providing man-made entertainment that damaged resources, had serious consequences. Pioneering research provided the basis for better environmental decision-making. In the 1920s and 1930s, George Melendez Wright researched and wrote about the role of predators and the issues caused by feeding wildlife. In 1963, A. Starker Leopold wrote a lengthy report on the importance of taking a holistic view of landscapes and natural processes. Since then, predators have been restored in parks, including wolves in Yellowstone. Activities like animal feeding and altering natural processes have been curtailed. The National Environmental Policy Act, passed in 1970, further clarified environmental protection processes.

Similarly, at Cape Cod National Seashore, the management of resources and visitor activities has evolved. Dune "sledding" in Provincetown was halted because of resource impacts. The NPS actively manages the park to protect several species listed at the state and federal levels as threatened or endangered under the Endangered Species Act. These include piping plovers, roseate terns, and red knots, as well as less obvious plants, turtles, bats, and toads. In the 1980s, there were fewer than 20 nesting pairs of plovers. We now count between 70 and 90 pairs each season, but low chick productivity keeps us looking for better ways to ensure species success.

Some of our management actions impact public activities and access. Examples include our response to erosion, restoration of degraded systems, like salt marshes, and the restriction of some recreational activities deemed to be detrimental to resources or contradictory to our mandate to "leave resources unimpaired for the enjoyment of future generations." And we now face a new challenge—global climate change. This issue was not on the horizon when the seashore was established in 1961. Early park planners could not have predicted that eventually facilities would be jeopardized by rising see levels and more frequent intense storms as is the current case at Nauset Light Beach and Herring Cove. Responding to global climate change is a challenge faced by national park managers across the country, and the entire agency is focused on building resilience to climate change.

We each have our own personal connections to parks, and the Centennial provides the opportunity to reflect on what the parks mean to each of us. My national park journey began at Morristown National Historical Park during our nation's Bicentennial. I had been teaching for several years, and my closest experience with national parks was what I viewed on "The Wonderful World of Disney" on Sunday nights. At Morristown, I worked alongside staff who were extraordinarily dedicated to the NPS mission, and I was hooked! I've dedicated my career to caring for our nation's most valued natural and cultural resources and to helping others find their personal connections. You've travelled your own journey, and I'm confident that you also feel a connection to a national park, whether Cape Cod or one of the other 400+ sites. As our Centennial year comes to a close, I encourage you to continue to Find Your Park and to consider how you can help preserve this park and others in perpetuity for future generations.

Love the Seashore?

Join the *Friends* of the Cape Cod National Seashore

By Pat Canavan, *President, Friends of Cape Cod National Seashore*

Welcome to Cape Cod National Seashore!

Whether kayaking or walking along the Atlantic or visiting a cultural site, you are fortunate to experience this very special place. Special places need special friends, and over the past 29 years, Friends of the Cape Cod National Seashore (FCCNS) has established its niche as the seashore's stalwart supporter. Like most friendships, ours is a two-way street, and our mission to preserve, protect, and enhance this fragile environment and unique cultural heritage has provided FCCNS members with exceptional opportunities and perspective on the seashore.

Our most recent success, last year's improvements to the exterior of Fort Hill's Penniman House, demonstrates the power of leverage. Our $100,000 contribution was enhanced by a $15,000 grant from Eastern National, the private, nonprofit bookstore within the seashore. That combination provided the impetus for the National Park Service's Centennial Fund to select the Penniman project. In essence, our $100,000 leveraged sufficient funds to complete $300,000 in improvements to this historic house and surroundings.

Not only do we dig into our pockets to protect precious cultural resources, we support summer concerts and lectures and winter programs. We also encourage visitors to make climate-friendly choices. For example, FCCNS and CARE for Cape and Islands have provided the filling stations for water bottles, available to you at key sites throughout the park. This one effort reduced the discarding of plastic bottles by 25,000 in the first six months of use.

From Fort Hill to the Truro Bog House to Race Point's Old Harbor Life-Saving Station to the trails that wind through the forests within the park and out to the Atlantic where seals haul out, FCCNS volunteers give and take. Along with financial support, we provide hundreds of hours of volunteer time, recording natural events through the park's phenology program, educating visitors on seal biology, clearing trails, and removing trash from our beautiful beaches.

In return for this support, FCCNS volunteers experience the wonder of the seashore. The wildlife, the often-hidden quiet beauty of ponds, the long stretches of uncrowded shoreline, the history, both natural and manmade, is ours to experience throughout the year. These experiences are available to you, too, through the public ownership of this wonderful place.

Do your part to preserve and enhance this beautiful area through your membership in the Friends of the Cape Cod National Seashore. You can join through our website www.fccns.org.

We're excited to announce our next big venture to improve Cape Cod National Seashore. Working hand-in-hand with the National Park Service, Friends is raising funds to repair the popular Red Maple Swamp Trail in Eastham. The trail has been closed for several years due to structural deterioration and safety concerns. We're honored to be working with the park on this important project, and we invite you to contact us at www.fccns.org if you'd like to donate.

Have a wonderful time at the seashore. Join FCCNS to preserve this special place.

How can you help Cape Cod National Seashore as a Volunteer-in-Park (VIP)?

For More Information

Check the park's website at www.nps.gov/caco and click on "Get Involved" to see a list of current volunteer opportunities.

- Staff information desks at Salt Pond and Province Lands visitor centers.
- "Adopt a trail" and prune brush along trails.
- Assist field staff in monitoring and protecting nesting shorebirds.
- "Adopt a beach" and assist biologists in monitoring piping plover nests or sections of remote beach.
- Communicate with the public at shorebird nest sites and beach access points from Eastham to Provincetown.
- Provide information to visitors who are viewing seals resting at low tide on a sandbar in Truro.
- Orient visitors to the 1898 Old Harbor Life-Saving Station in Provincetown.
- Assist research about precipitation in the seashore by visiting a salt-marsh field research site in Provincetown.
- Assist researchers in development of a long-term monitoring program for marsh birds.

Join a dedicated team of volunteers and make Cape Cod National Seashore a better place.

Photo by Jesse Mechling

Hydration Stations Quench Your Thirst

Sydney Fitch, *Barnstable County AmeriCorps Cape Cod / Cape Cod National Seashore Planning Assistant*

As a Climate Friendly Park, Cape Cod National Seashore is committed to decreasing its greenhouse gas emissions by over 20 percent by the year 2020. When you refill a reusable water bottle, you decrease the greenhouse gas emissions associated with the production, filling, packaging, and transport of disposable water containers.

The national seashore has installed water bottle filling stations at high public- use areas of the park, making it easy to refill your water bottle.

Filling station locations:

- Inside Salt Pond Visitor Center
- Inside Province Lands Visitor Center
- Outside Herring Cove Beach Bathhouse
- Outside Coast Guard Beach Bathhouse
- Inside Highland Light Keeper's House Bookstore
- Outside Salt Pond Visitor Center Restroom

In just two seasons, our visitor center filling stations filled the equivalent of over 54,000 disposable plastic bottles! Help us make a difference—please refill your water bottle.

Thank you to CARE for the Cape and Islands and Friends of the Cape Cod National Seashore for funding the purchase of the park's filling stations.

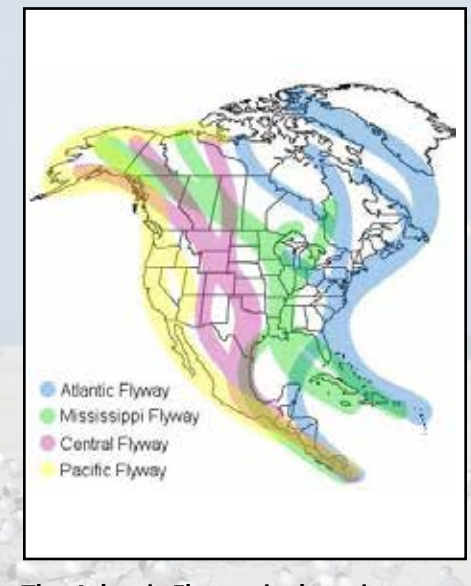
Marathon Migrations

Each fall, thousands of migrating shorebirds rest and feed on national seashore beaches for several weeks. This process, called staging, is critical to birds traveling along the Atlantic Flyway between breeding grounds as far north as the Arctic, and wintering grounds as far south as the Antarctic. Roseate terns and red knots are among the more than 40 species of birds that stage at national seashore beaches. As many as 40,000 birds may be here at any one time.

The birds need quiet seclusion to rest after long periods of foraging at sea. Young roseate terns, which are still dependent on their parents for food and learning to fish, need to eat as much as possible to build up their flight muscles. Once they leave North America, they stop only briefly in the Caribbean before continuing to South America. Red knots arrive at our beaches very thin. They eat constantly to increase fat mass before migrating, gaining up to 10 percent of their body weight each day. For a 100-pound person, this is equivalent to gaining 10 pounds a day!

Enjoy this dramatic scene from a distance, and walk around, and not through, groups of resting birds. Human activity that startles the birds causes them to use precious energy needed for migration.

Researchers estimate that at least 75 percent of the entire North American breeding population of endangered roseate terns rest and feed at Cape Cod National Seashore during migration. Staging is critical to help prepare the birds for migrations of up to 4,500 miles.



The Atlantic Flyway is the primary migration route for more than 500 bird species and millions of individual birds. Over 40 species rest and feed on national seashore beaches during migration.

Scenic Routes and Overlooks

View of Nauset Marsh from Fort Hill area, Eastham *NPS photo*

At Cape Cod National Seashore, opportunities for inspiration, reflection, and renewal abound. Use this information, in conjunction with the park map, to discover the drama of the ocean surf, or the subtle beauty of a cultural landscape. Allow 15 to 30 minutes at each site to take in the view, or walk to a scenic overlook.

Eastham

Fort Hill Area - Fort Hill Road, off Route 6. Open fields, views of Nauset Marsh, historic Penniman House (occasional, scheduled tours and open houses). Access to Red Maple Swamp Trail. Limited parking. Seasonal restrooms.

Coast Guard and Nauset Light beaches, Nauset and Three Sisters light-houses - off Route 6 at the traffic light at Nauset Road, near Salt Pond Visitor Center. Ocean View Drive affords ocean and marsh views and an opportunity to see historic lighthouses. Seasonal restrooms at beaches. Seasonal beach fee may apply. Highly congested in summer; spring and fall use recommended.

Wellfleet

Atwood-Higgins House - 269 Bound Brook Island Road. Inquire at visitor centers for directions. 18th-century Cape house (occasional, scheduled tours) accessed from true "back roads" to Bound Brook Island. *Caution:* Circuitous, narrow roads. Limited parking.

Marconi Station Site - 195 Marconi Station Road, off Route 6 at the traffic light at Marconi Station area. High sand cliffs above the ocean, and the history of Marconi and his wireless radio station. Overlook platform. Access to Atlantic White Cedar Swamp Trail. Seasonal restrooms.

Truro

Highland Lighthouse (Cape Cod Light) and Highland House - 27 Highland Light Road, off Route 6 at the North Highland Road exit, North Truro. The oldest lighthouse on Cape Cod, and adjacent museum (open seasonally, fees). Overlook platform. Seasonal restrooms.

Pilgrim Heights - look for National Park Service sign off Route 6, North Truro. Viewpoint overlooks kettle hole, with distant views of the sand dunes of the Province Lands. Access to Pilgrim Spring Trail. Picnic area. Seasonal restrooms.

Provincetown

Old Harbor Life-Saving Station at Race Point Beach - 191 Race Point Road. Historic structure at Race Point Beach (occasional, scheduled open houses), with dune and ocean views. Seasonal beach fee may apply.

Race Point Road - off Route 6 at Race Point Road traffic light. Scenic, 2-mile road through beech and oak forest and the Province Lands dunes. Connects Race Point Beach to Province Lands Road. Herring Cove Beach loop (additional 2 miles). Access to Beech Forest Trail, Province Lands Bicycle Trail, and Province Lands Visitor Center (seasonal).

The Lighthouses of Cape Cod National Seashore and Beyond

1. Race Point Light, Provincetown

The first Race Point Light was erected in 1816. The current lighthouse and keeper's house date from 1876. Over 100 ships wrecked on the treacherous shoals here between 1816 and 1946. *Directions:* Inaccessible by road. From Route 6, turn at the lights onto Race Point Road and follow to its end. Park in the Race Point Beach parking area. Walk along the beach about 2 miles to Race Point Light. *Beach fees apply during summer months and on weekends in late spring and early fall.*

2. Wood End Light, Provincetown

A twin to Long Point Light guarding the entrance to Provincetown Harbor, Wood End Light is located toward the end of the breakwater. Built in 1873, the lighthouse is now solar-powered. *Directions:* Inaccessible by road. Park at the rotary at the west end of Commercial Street. Walk across the breakwater, then bear straight across the neck about ½ mile to Wood End Light. Summer boat service from MacMillan Wharf.

3. Long Point Light, Provincetown

This light at the entrance to Provincetown Harbor was first lit in 1827. The lighthouse and keeper's cottage were rebuilt in 1875. In 1952, the light was automated. Solar panels were installed in 1982. *Directions:* Walk across Provlncetown breakwater. Turn left and follow Long Point approximately 1½ miles to the end. Summer boat service from MacMillan Wharf.

4. Highland Light (Cape Cod Light), 27 Highland Light Road, North Truro

Traditionally, Highland Light was the first light seen on a voyage from Europe to Boston. In 1798, Highland was the first Cape Cod lighthouse built. The present brick lighthouse was erected in 1857 on the 100-foot-high cliffs above the ocean. It was moved inland in 1996. *Directions:* From Route 6 In North Truro, turn onto Highland Road, which is over 3 miles north of Truro Center. At the end of Highland Road, go right onto Lighthouse Road and into the parking area. *Open seasonally and operated by Eastern National, Inc. www.highlandlighthouse.org*

5. Nauset Light, intersection of Oceanview Drive and Cable Road, Eastham

Nauset Light was built as three brick towers in 1838 to differentiate the location from Highland and Chatham lights. When erosion claimed the originals in 1892, they were replaced by three wooden towers called the Three Sisters. The current tower, moved here from Chatham in 1923, succeeded them. *Directions:* Turn right off Route 6 at the lights at Salt Pond Visitor Center, Cape Cod National Seashore. Continue to Coast Guard Beach, then turn left onto Ocean View Drive. Drive 1 mile to the Nauset Light Beach parking area. *Operated seasonally for public access by agreement with the Nauset Light Preservation Society. www.nausetlight.org*

6. Three Sisters lighthouses, Cable Road, Eastham

Built at Nauset in 1892. Two of the three lights were sold to become a summer cottage in 1911. The third one was replaced in 1923 by one of the two Chatham lights. The Three Sisters are now located safely back from shore-front erosion in the Cape Cod National Seashore. *Directions:* Same directions as to Nauset Light Beach. Short walk inland on Cable Road from the parking area to Three Sisters. Limited parking at Three Sisters.

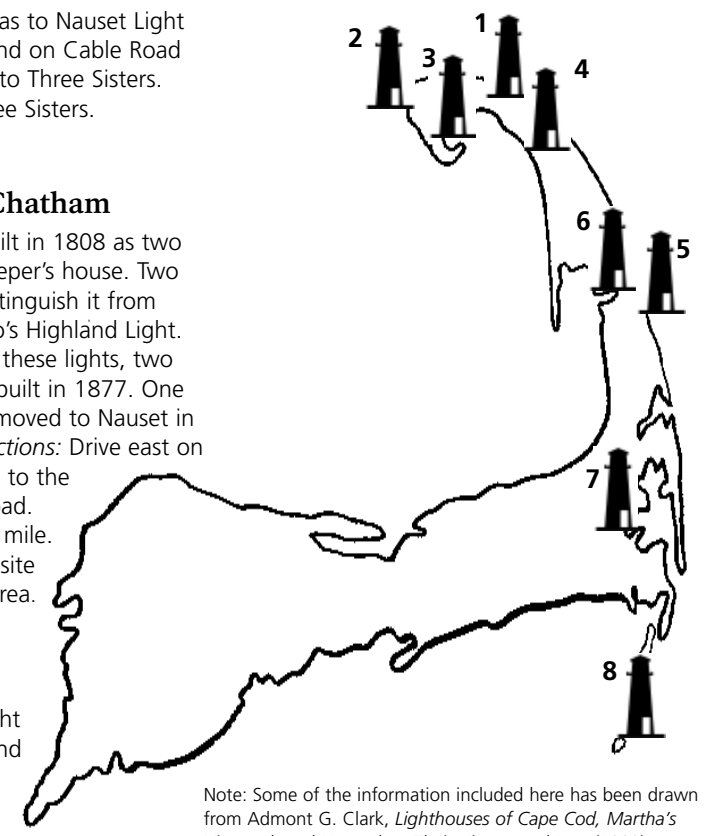
7. Chatham Light, 70 Main Street, Chatham

Chatham Light was built in 1808 as two brick towers with a keeper's house. Two lights were used to distinguish it from the single light at Truro's Highland Light. When erosion claimed these lights, two new metal ones were built in 1877. One of the two lights was moved to Nauset in Eastham in 1923. *Directions:* Drive east on Main Street, Chatham, to the junction with Shore Road. Turn right and drive ½ mile. The lighthouse Is opposite the overlook parking area.

8. Monomoy Point Light, Chatham

The first Monomoy Light was erected in 1823 and rebuilt in 1849 with cast-iron plates lined with brick.

The Monomoy Point Light was decommissioned in 1923 because the Chatham Light covered the area. Monomoy is now part of the Monomoy National Wildlife Refuge of the U.S. Fish & Wildlife Service. *Directions:* The island is accessible only by boat. The light is at the end of 5-mile-long South Monomoy Island.



Note: Some of the information included here has been drawn from Admont G. Clark, *Lighthouses of Cape Cod, Martha's Vineyard, and Nantucket: Their History and Lore* (1992); and Laurel Guadazno, *Cape Cod Lighthouses* (1994).

Local Area Information

Chambers of Commerce:

Cape Cod Chamber of Commerce: 5 Patti Page Way, Centerville
Website: www.capecodchamber.org Email: info@capecodchamber.org
Phone: 508-362-3225

Chatham:
2377 Main Street, Chatham
www.chathaminfo.com
Email: chamber@chathaminfo.com
Phone: 800-715-5567
Info Booth: 508-945-5199

Orleans:
Eldridge Parkway at Route 6A,
and 44 Main Street, Orleans
www.orleanscapecod.org
Email: info@orleanscapecod.org
Phone: 508-255-7203
Info Booth: 508-255-1386

Eastham:
4730 State Highway, Eastham
www.easthamchamber.com
Email: info@easthamchamber.com
Phone: 508-240-7211
Info Booth: 508-255-3444

Wellfleet:
1410 State Highway, Wellfleet
www.wellfleetchamber.com
Email: info@wellfleetchamber.com
Phone: 508-349-2510

Truro:
State Highway at Head of the Meadow Road,
North Truro
www.trurochamberofcommerce.com
Email: info@trurochamberofcommerce.com
Phone: 508-487-1288

Provincetown:
307 Commercial Street, Provincetown
www.ptownchamber.com
Email: info@ptownchamber.com
Phone: 508-487-3424

Outer Cape Bicycle Rentals:

Arnold's, 329 Commercial Street, Provincetown	508-487-0844
Gale Force, 144 Bradford Street Ext., Provincetown	508-487-4849
Idle Times, 4550 State Highway, Eastham	508-255-8281
Idle Times, 2616 State Highway, Wellfleet	508-349-9161
Idle Times, 29 Main Street, Orleans	508-244-1122
Little Capistrano, 30 Salt Pond Road, Eastham	508-255-6515
Little Capistrano, 1446 State Highway, Wellfleet	508-349-2363
The Bike Shack, 63 Shank Painter Road, Provincetown	508-487-0232
Provincetown Bikes. 42 Bradford Street, Provincetown	508-487-8735

Shellfishing in Eastham:

Eastham Natural Resources Office (permits)	508-240-5972
555 Old Orchard Road	

Whale Watching in Provincetown:

Dolphin Fleet, 307 Commercial Street #1	800-826-9300
Provincetown Whale Watches, 309 Commercial Street	508-487-1102

Dune Tours in Provincetown:

Art's Dune Tours, 4 Standish Street, Provincetown	508-487-1950

Kayak and Boat Rentals:

Goose Hummock, 15 Route 6A, Orleans	508-255-0455
Nauset Marine East, 235 Main Street, Orleans	508-255-3045
Castaways Marine, 4655 State Highway, North Eastham	508-255-7751
Jack's Boat Rental, 2616 State Highway, Wellfleet	508-349-9808
Wellfleet Marine, 25 Holbrook Avenue, Wellfleet	508-349-6417
Flyer's Boat Rental, 131 Commercial Street, Provincetown	508-487-0898
Venture Athletics Water Sports, 237 Commercial Street, Provincetown	508-487-9442
Provincetown Aquasports, 333R Commercial Street, Provincetown	508-413-9563

Eco Tours:

Educational Adventures on the Outer Cape, Orleans *and* Cape Kayaking, Orleans	508-247-7402
Blue Claw Boat Tours, Orleans	508-240-5783
Great Marsh Kayak Tours, Mashpee	508-328-7064
Wellfleet Bay Wildlife Sanctuary, Welllfleet	508-349-2615
Center for Coastal Studies, MacMillan Wharf, Provincetown	508-487-3622

Outer Cape Campgrounds, RV Parks, State Parks:

Atlantic Oaks, 3700 State Highway, Eastham	508-255-1437
Maurice's, 80 State Highway, Unit 1, Wellfleet	508-349-2029
Paine's, 180 Old Kings Highway, Wellfleet	508-349-3007
Adventure Bound Camping Resorts:	508-487-1847
North Truro Campground, 46 Highland Road, *and* Horton's Campground, 71 Highland Road, North Truro	
North of Highland, 52 Head of the Meadow Road, North Truro	508-487-1191
Coastal Acres, 76R Bayberry Avenue, Provincetown	508-487-1700
Dune's Edge, 386 State Highway, Provincetown	508-487-9815
Nickerson State Park, Brewster	508-896-3491
Hostelling International	http://capecod.hiusa.org

Park and Local Area Map

Rules of the Road

MOTORIST WARNING

Wear your seat belt. It's the LAW.

Massachusetts state law provides pedestrians the right of way in a crosswalk.

Be aware of pedestrians, bicyclists, and other park users, and share the road.

Public Transportation

Cape Cod Regional Transit Authority (CCRTA)

The *Flex* bus picks up and drops off passengers at designated stops and also "flexes" off its route up to ¾ of a mile by reservation.

The *Flex* bus travels from Brewster on Route 6A, down Route 6 through the towns of Orleans, Eastham, Wellfleet, and Truro to Provincetown. It connects to the *H2O Line* at Stop & Shop, Orleans, and in the summer, to the Provincetown/North Truro Shuttle at Highland Road, Truro, and Stop & Shop in Provincetown, with Hyannis as its destination.

Flex also connects with the Plymouth & Brockton bus service to Boston.

Fares: $2 one way per person for adults and youth; $1 for 60 and older, and for people with disabilities. Day and monthly passes are available.

Website for schedules: www.capecodtransit.org

Cape Flyer Bring your bike for FREE! Weekends from Memorial Day through Labor Day, travel comfortably by train from Boston's South Station to Hyannis. See more at www.capeflyer.com.

Ferry Information:

Martha's Vineyard and Nantucket

Steamship Authority
www.steamshipauthority.com

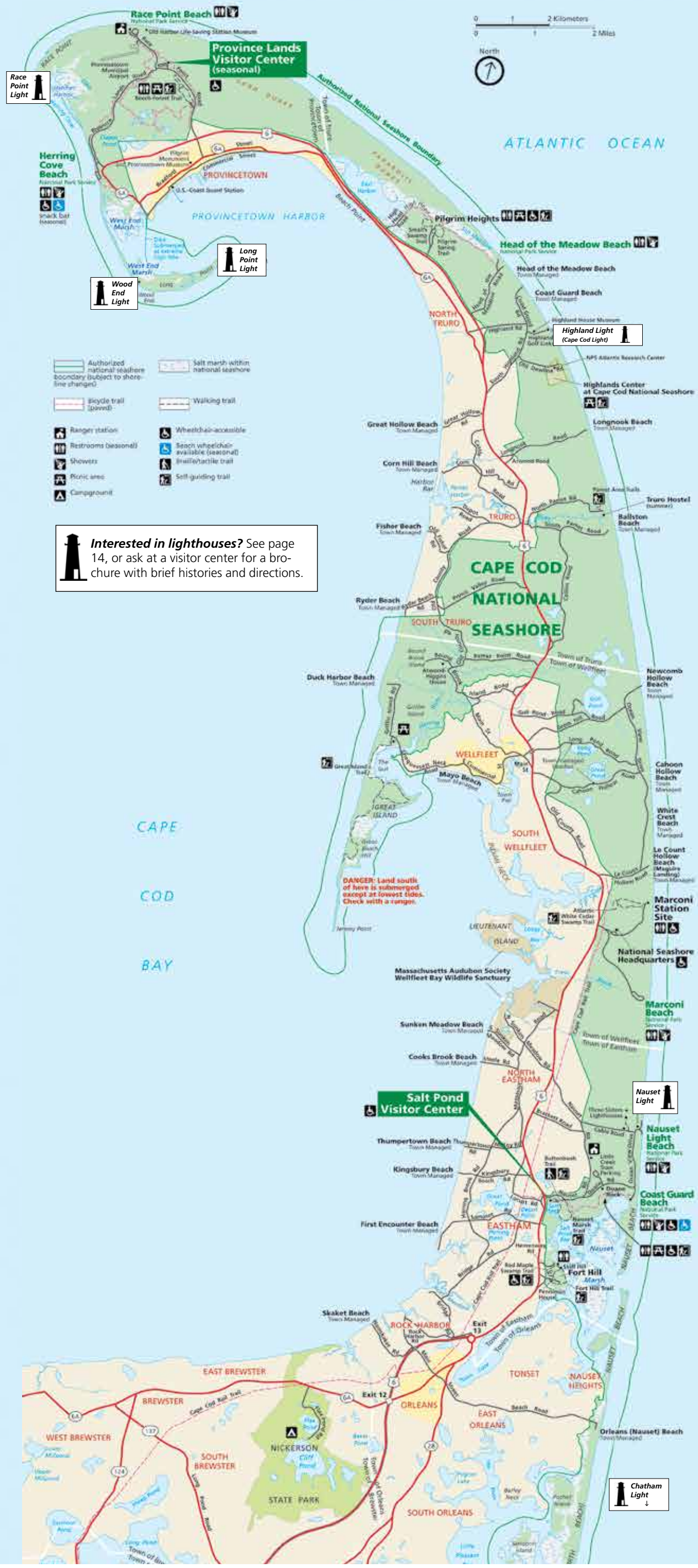
Hyline Cruises
www.hylinecruises.com/

Freedom Cruise Lines
www.nantucketislandferry.com

Provincetown

Bay State Cruises
www.baystatecruisecompany.com

Boston Harbor Cruises
www.bostonharborcruises.com/provincetown-ferry



Interested in lighthouses? See page 14, or ask at a visitor center for a brochure with brief histories and directions.